MITSUBISHI

# SERVICE MANUAL

FOR

## 15"FS HIGH RESOLUTION DIGITAL CONTROLLED AUTO-TRACKING COLOR DISPLAY MONITOR

MODEL NAME : SD5700C
SD5702C
SD5707C
SD5703CSG
SD5704CSG

MITSUBISHI ELECTRONICS MANUFACTURING SINGAPORE PRIVATE LIMITED

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# PRECAUTION MESSAGES

## X-RADIATION WARNING

The surface of picture tube may generate X-Radiation.
Precaution during servicing, and if possible use of lead apron or metal for shielding is recommended. To avoid possible exposure to X-Radiation and electrical shock hazard, the high voltage compartment and the picture tube shield must be kept in place whenever the chassis is in operation.
When replacing picture tube use only designated replacement part since it is a critical component with regard to X-Radiation as noted above.

## CRITICAL COMPONENT REPLACEMENT WARNING

The components marked "⚠" are critical components for X-rays radiation.
When replacing these parts, use exactly the same one indicated in parts list.
Please do not remove the seal of sealed potentiometer

The components stated above are no field serviceable parts.
If broken, please contact with qualified personnel of Mitsubishi Electric Corp. or The distributor which indicated on name plate..

## FUSE REPLACEMENT INSTRUCTION

Please replace the following components with the same part mentioned.

| Location No. | Mitsubishi Part No. | Type No. | Manufacturer No. |
|---|---|---|---|
| F901 | CP283P017A70 | 215004, 4A | Littelfuse Inc |
| F951 | CP283P001A50 | SSFR, 3A | SOC Corp |
| F952 | CP283P001A50 | SSFR, 3A | SOC Corp |
| F953 | CP283P016A31 | 25101.5, 1.5A | Littelfuse Inc |
| F954 | CP283P011A21 | 251001, 1A | Littelfuse Inc |
| F956 | CP283P011A21 | 251001, 1A | Littelfuse Inc |
| F957 | CP283P011A21 | 251001, 1A | Littelfuse Inc |
| | | | |

# Chapter One : SPECIFICATION

## 1.1. ELECTRICAL CHARACTERISTIC

### 1.1.1. CRT description

| | |
|---|---|
| a) Size | 15 inch diagonal |
| b) Deflection angle | 90 degree |
| c) Electron gun | In line type |
| d) Focusing method | Electrostatic |
| e) Convergence method | Magnetic |
| f) Mask type | Invar shadow mask |
| g) Trio spacing | 0.28 mm |
| h) Array | Dot pitch |
| i) Phosphor type | P22 |
| j) Phosphor persistence | Medium short |
| k) Implosion protection | Tension band |
| l) Face plate | |
| Transmission | Tinted glass |
| Coating | Anti-reflection with anti-static coating |

### 1.1.2. Power supply

| | |
|---|---|
| a) Input voltage | 100Vac - 120Vac + 10% 50/60 Hz<br>220Vac - 240Vac +10% 50Hz |
| b) Power consumption | Nominal 95W |
| c) AC leakage current | Less than 3.5mA |
| d) Inrush current | Less than 50A 0-peak<br>(At 120V AC/at 240V AC on cold starting) |
| e) Power management (4 modes) | |
| 1) Normal mode | power < 95W at 120Vac |
| 2) Standby mode : | power < 80W at 120Vac |
| 3) Suspend mode : | power < 15W at 120Vac |
| 4) Complete off mode : | power < 8W at 120Vac |

### 1.1.3. Signal input

| | |
|---|---|
| a) Video signal | R.G.B analog |
| b) Sync. input signal | External composite sync. (positive/negative)<br>H & V separate sync. (positive/negative) |
| c) Video input impedance | 75 ohm to ground |
| d) Sync. input impedance | 2.2K-ohm |
| e) Signal level | |
| Video signal | 0. 7Vp-p |
| Sync. signal | TTL level |

### 1.1.4. Deflection characteristic

| | |
|---|---|
| a) Horizontal deflection | Model SD5700C/02C/05C<br>31.5KHz to 64KHz<br>Model SD5703CSG/04CSG<br>31.5KHz to 64KHz<br>Model SD5707C<br>24KHz/31.5KHz to 64KHz |
| Scanning frequency Blanking | 3.6μsec (typ) |
| b) Vertical deflection | 50Hz to 90Hz |
| Scanning frequency Blanking | 0.6 msec (typ) |
| time Sync.pulse width | 3H (typ) |

### 1.1.5. High voltage

24.8 kV (std)

### 1.1.6. Degaussing

Auto degaussing

### 1.1.7. Video performance

| | |
|---|---|
| a) Video Performance | 100MHz ± 3dB (typ) |

### 1.1.8. Warm up time

More than 30 minutes

## 1.2. SCREEN CHARACTERISTIC

### 1.2.1. Display resolution

1280 dots X 1024 lines (typ)

### 1.2.2. Display size (data area)

| | |
|---|---|
| Horizontal | 260 mm (varies by signal timing) |
| Vertical | 195 mm (varies by signal timing) |

### 1.2.3. Raster size regulation

| | |
|---|---|
| Static dislocation | 2% (typ) |

### 1.2.4. Misconvergence

| | |
|---|---|
| a) Center area (within 195 mm diameter circle) | 0.30 mm (max) |
| b) Other area | 0.40 mm (max) |
| c) Magnetic field for set up | Model: SD5700C/SD5704CSG<br>Horizontal 0.0mT<br>Vertical +0.04mT<br>Model: SD5702C<br>Horizontal 0.0mT<br>Vertical -0.052mT<br>Model: SD5703CSG/SI<br>Horizontal 0.0mT<br>Vertical -0.01mT<br>Model SD5707C<br>Horizontal 0.0mT<br>Vertical +0.035mT<br>Model SD5703CSG-HK<br>Horizontal 0.0mT<br>Vertical +0.03mT |

### 1.2.5. Brightness (screen center)

| | |
|---|---|
| Brightness control | Center position |
| Contrast control | Max position |
| Video signal | Full white screen |
| Brightness | More than 110cd/m$^2$ |

### 1.2.6. Color temperature(screen center)

| | Color Coordinate | |
|---|---|---|
| | SD5700C | SD5702C/03CSG/04CSG/07C |
| a) Standard color | $X = 0.300 \pm 0.02$<br>$Y = 0.305 \pm 0.02$ | $X = 0.283 \pm 0.02$<br>$Y = 0.297 \pm 0.02$ |
| b) Broadcast color | $X = 0.313 \pm 0.02$<br>$Y = 0.329 \pm 0.02$ | $X = 0.313 \pm 0.02$<br>$Y = 0.329 \pm 0.02$ |
| c) Publish color | $X = 0.336 \pm 0.02$<br>$Y = 0.352 \pm 0.02$ | $X = 0.336 \pm 0.02$<br>$Y = 0.352 \pm 0.02$ |

### 1.2.7. White uniformity

| | |
|---|---|
| Brightness difference | Less than 30%<br>(Active data area)<br>(▲ 4 Corner Brightness / Center brightness) |

### 1.2.8. Color tracking

▲X = ±0.020, ▲Y = ±0.020
Contrast changing Brightness
fixed at center position.

### 1.2.9. Geometric distortion

a) Pincushion / Barrel distortion

Top & Bottom 3 mm (max)
Right & Left 3 mm (max)

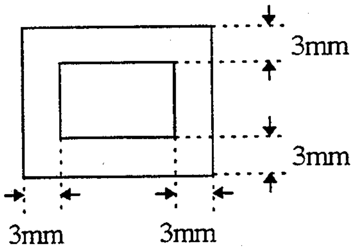
b) Centering

Horizontal ± 7 mm (max)
Vertical ± 7 mm (max)
for preset timing

c) Non linearity $\frac{(X_{max} - X_{min}) \times 100}{X_{max}}$ %

Horizontal 12% (max)
Vertical 12% (max)

d) Other distortion



** for preset timing*

## *1.3. Others*

### 1.3.1. User controlsRD15G/SD5707C-SD

- Power switch
- Function select button
- Adjustment control button
- Reset button
- OSD off button

### 1.3.2. Control function

* All items are controlled via On Screen Display

- Contrast / Brightness
- Horizontal position
- Horizontal size
- Vertical position
- Vertical size
- Side bow/Keystone
- Color mode select
- Power Management (on/off)
- Clamp position (front/back)
- Red gain
- Blue gain

### 1.3.3. Connector type

| | |
|---|---|
| a) Power | Model SD5700C/02C/03CSG/04CSG<br>3P IEC Plug with AC power cord<br>Model SD5707C<br>2P Pigtail |
| b) Signal | D Sub 9-15P male connector |

### 1.3.4. Cabinet

Mitsubishi standard
(with Tilt / Swivel stand)

### 1.3.5. Regulation standards

**SD5700C**

| | |
|---|---|
| a) Safety | UL / c-UL |
| b) EMI / LOW RADIATION | FCC-B / DOC / MPR-II |
| c) X-Ray | DHHS / HWC |
| d) ERGONOMICS | TÜV-ISO9241 |
| e) Others | EPA |

**SD5707C**

| | |
|---|---|
| a) Safety | In accordance with UL |
| b) EMI / LOW RADIATION | VCCI-II / In accordance with MPR-II |
| c) X-Ray | In accordance with DHHS |
| d) ERGONOMICS | In accordance with TÜV-ISO9241 |
| e) Others | In accordance with EPA |

**SD5702C / SD5703CSG**

| | |
|---|---|
| a) Safety | TÜV-GS |
| b) EMI / LOW RADIATION | In accordance with FCC-B / MPR-II |
| c) X-Ray | RÖV |
| d) EROGONOMICS | TÜV-ISO90241 |
| e) Others | In accordance with EPA |

**SD5704CSG**

| | |
|---|---|
| a) Safty | TÜV-GS/NEMKO/SEMKO/FIMKO |
| b) EMI / LOW RADIATION | BZT / MPR-II |
| c) X-Ray | RÖV |
| d) ERGONOMICS | TÜV-ERGO/ TÜV-ISO90241 |
| e) Others | CE-MARK/TCO92/NUTEK |

### 1.3.6. Preset timing

Refer to Appendix I

# Chapter Two : CIRCUIT DESCRIPTION

The monitor can be divided into 4 schematic diagram and consists of 3 PCB. This can be simplified as follows: -

a) Deflection schematic diagram (PCB-MAIN)
b) Power schematic diagram (PCB-MAIN)
c) CRT and clamp pulse position schematic diagram (PCB-CRT PCB-SYNC)
d) Control schematic diagram (PCB-MAIN)

Every schematic diagram will be explained in detail in the following sections.

SD570*C series monitor is a digital control auto-tracking monitor that can support horizontal input sync. signal scanning frequency from 31 kHz to 64 kHz (For SD5707C scanning frequecy from 24Khz/31.5Khz to 64Khz) and vertical input sync. signal scanning frequency from 50Hz to 90Hz. The auto-tracking function is done by microprocessor and ASIC in PCB-MAIN.

To maintain optimum operation of circuit over wide frequency range, some elements in circuits are switched according to horizontal frequency of input sync. signal. The control circuit in PCB-MAIN counts the frequency of input sync signals, and generates control signal.

The control circuit also maintains the other control signals to adjust picture sizes, position, etc. electrically.

## 2.1. *Power supply*

This auto-tracking monitor is equipped with world wide power supply which can support 100Vac ±10% for SD5707C and100V - 240 Vac 50Hz - 60Hz automatically with maximum input power of less than 95W.

The power supply works as switched mode operation with RCC (Ringing Choke Converter) where its switching frequency is corresponding to input supply voltage and output load currents.

The output lines of this power supply are shown in Figure 2.1 with their main load.

| OUTPUT LINE | MAIN LOAD |
|---|---|
| 7V | CRT Heater |
| 12V | ICs in PCB-main, Pre-amp. for RGB-gain |
| 15V | H-Drive |
| 24V | V-Deflection |
| 5V | CPU/Sync Separator circuit |
| 75V | Video Circuit |
| 190V | Video cut off circuit & Chopper circuit |
| 60V- 155V | H-Deflection, HV circuit |

Fig 2. 1: POWER OUTPUT LINES

## 2.1.1. Rectifier and filter circuit

The AC input voltage is rectified by the diode bridge in IC901, which can simplified in Figure 2.2.

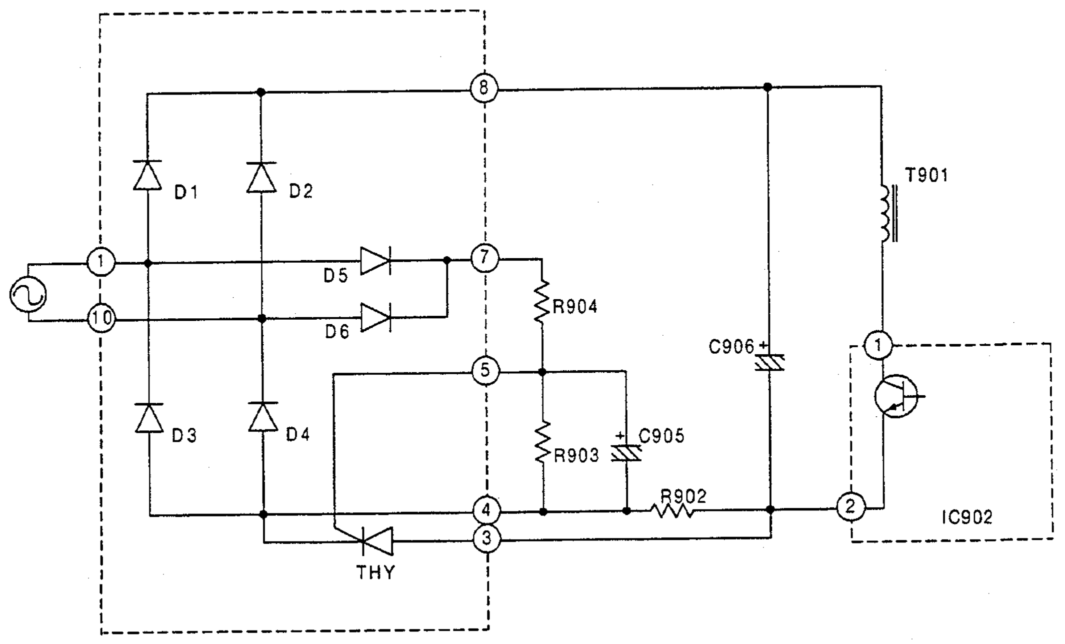


FIG 2.2. RECTIFIER CIRCUIT

The resistor R902 is to suppress the inrush current during power on. D5 and D6 form a full wave rectifier to provide current path through R904 to charge up C905. After C905 is charging, the thyristor THY is turned on and input current is by-passing THY. R903 adds as discharge path for C905 when power off.

After power on, the rectified voltage is filtered by charging capacitor C906.

## 2.1.2. Degauss circuit

The monitor is provided the auto power on degauss function at first power on, relay is activated 1 sec later to provide degauss action for 500 ms and the relay is deactivated. This allows the posistor to cool off for another degauss action.

## 2.1.3. Primary circuit.

The function of converting AC source to DC supplies is provided by RCC (Ringing Choke Converter). When the power switch is turned on ,IC902 pin 9 voltage rises until it reach 7V to activate the internal oscillation to operate the switching transistor internally. Figure 2.3 shows the internal block diagram of IC902. The flow of collector current through the Transformer provide feedback for proper operation.

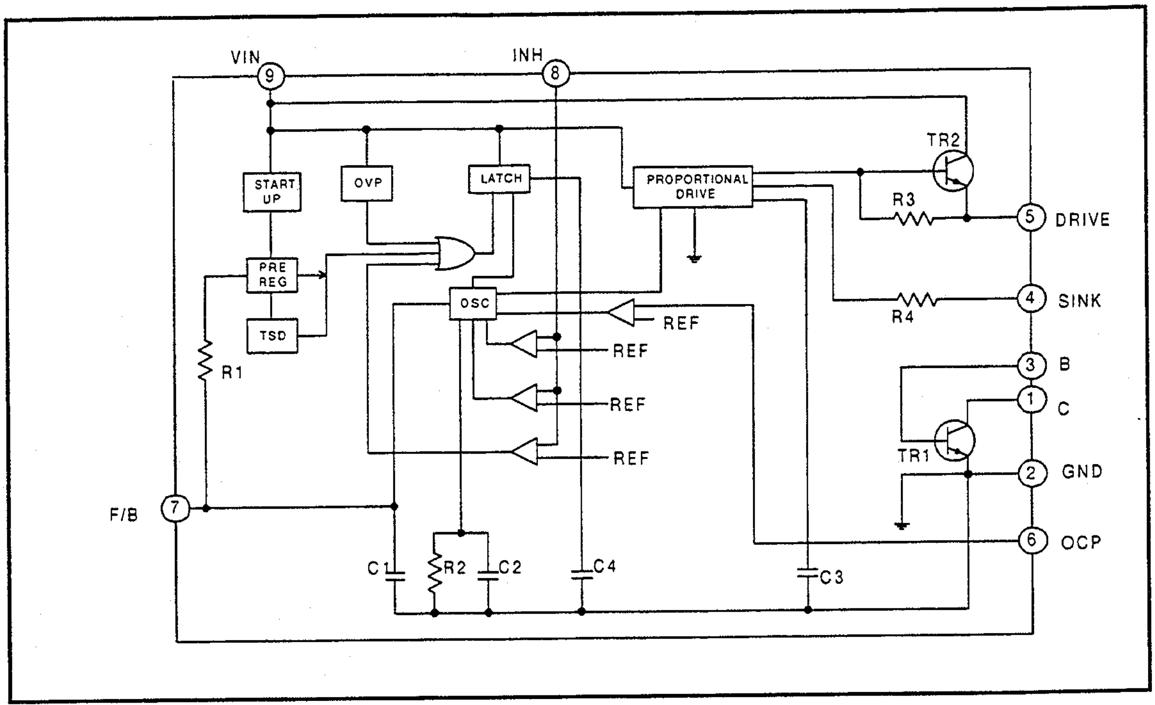

VIN
9
INH
8
START UP
OVP
LATCH
PROPORTIONAL DRIVE
TR2
R3
5
DRIVE
PRE REG
TSD
OSC
REF
REF
REF
REF
R4
4
SINK
3
B
1
C
R1
TR1
2
GND
F/B
7
6
OCP
C1
R2
C2
C4
C3

FIG 2.3 : IC902 STR-S6707

The on / off ratio of TR1 determines the energy transfer from primary winding to secondary winding and 2nd primary winding. Pin 6 output is from the 2nd primary winding which is used as supply voltage to IC902, switching frequency control according to AC voltage input (pin 8) and over current protection (pin 6) purpose.

An error amplifier IC951 detects the secondary output voltage and makes a feedback to primary circuit via photo-coupler IC903. The IC903 will controls input current of IC902 feedback pin, and hence changes the on / off time ratio off TR1. The base current of TR1 is supplied by the discharge of C915. From this process, the transformer load regulation can maintain constant.

### 2.1.4. Power management circuit

This monitor has power management function which depends on sync. signal input. The monitor has 4 modes to save power consumption.

| MODE | H-SYNC | V-SYNC | STATUS | PICTURE |
|---|---|---|---|---|
| Normal | ON | ON | - | Normal |
| Stand-by | OFF | ON | No video | Black |
| Suspend | ON | OFF | Heater on | Black |
| Complete-off | OFF | OFF | Heater off | Black |

Each mode's power (bracket for Japan Market )consumption and LED indication of power is as follows:

| MODE | POWER CONSUMPTION | STATUS |
|---|---|---|
| Normal | ~ 95W(~95W) | - |
| Stand-by | ~ 80W(~75W) | 3 sec blink / 1.5 sec interval |
| Suspend | ~ 15W(~15W) | 3 sec blink / 1.5 sec interval |
| Complete off | ~ 8W(~5W) | 3 sec blink / 1.5 sec interval |

Three control signals are output from CPU in order to carry out power management function. They are contrast voltage, suspend signal (SUSP) and shutdown signal (SHDW). Figure 2.4 shows these signals operating state.

|  | Normal | Stand-by | Suspend | Completed-off |
|---|---|---|---|---|
| CONT | OV-5V | LOW | LOW | LOW |
| SUSP | HIGH | HIGH | LOW | LOW |
| SHDW | HIGH | HIGH | HIGH | LOW |

Fig. 2.4: Power Management Signals Operating State

### 2.1.5. Secondary circuit

All the output lines are equipped with half-wave rectifier and LC filter. Power management circuit also equipped here which is controlled by SUSP signal at suspend mode and completed-off mode. When power management activated, Q951 will turn on and cause the feedback current of IC903 change. This will change the power supply switching frequency and turns to power management mode.

## 2.1.6. Chopper circuit

The horizontal deflection and high voltage circuits require wide range of +B voltage from 60V - 155V to realize the auto-scanning function. The +B voltage (60V ~ 155V) whose switching frequency is corresponding to H-Sync input is regulated by the DC chopper and series regulator method from 190V line.

This +B voltage (60V - 155V) is generated by the chopper shown in Fig. 2.5

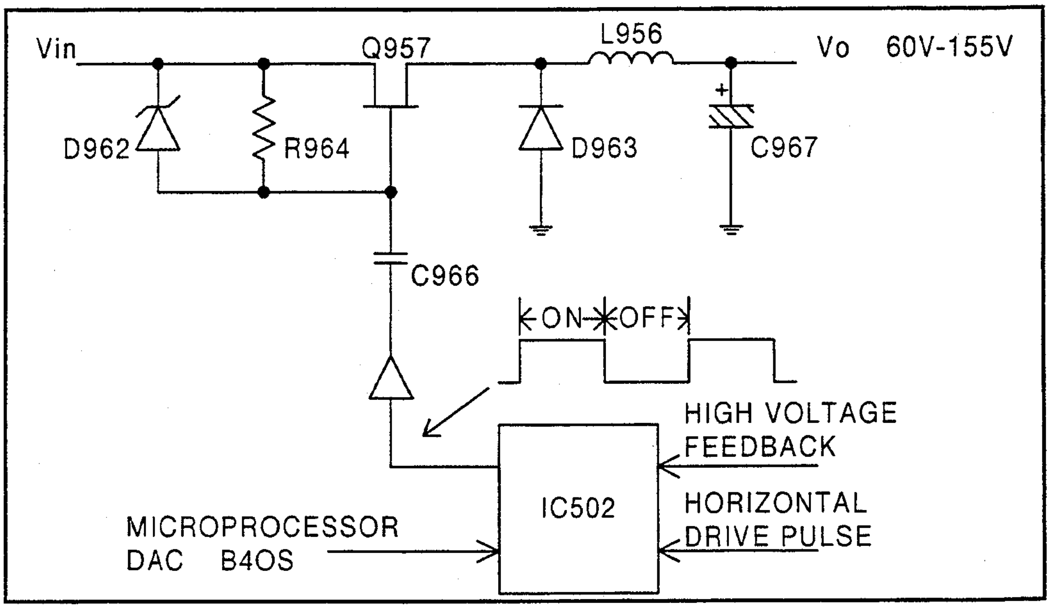

Vin
Q957
L956
Vo 60V-155V
D962
R964
D963
C967
C966
ON
OFF
HIGH VOLTAGE FEEDBACK
IC502
HORIZONTAL DRIVE PULSE
MICROPROCESSOR DAC B4OS

FIG 2.5 : CHOPPER CIRCUIT

The output voltage Vo is expressed by the equation

$$Vo = \frac{Ton}{Ton + Toff} \times Vin$$

The IC502 is working on mono-multivibrator concept. The triggering signal for IC502 is Horizontal drive pulse which comes from output of IC501, thus IC502 is triggered every horizontal period. IC502 output signal time ratio (Ton / TON + TOFF) can be adjusted by µp B40S signal.
It is also for IC502 frequency free running control.

High-voltage feedback signal from FBT is used for high-voltage regulation control, this will explain more detail in the following chapter.

As the result, the switching frequency of Q957 is identical with the horizontal frequency,

$$fH = \frac{1}{TH} = \frac{1}{Ton + Toff}$$

Then the output voltage Vo can be expressed by the equation

$$V_o = T_{on} \times f_H \times V_I$$

Hence, the output voltage is in proportion to horizontal frequency and can be controlled by On/Off time of IC502

## 2.2. *Deflection circuit*

The deflection circuit can simplify into block diagram as shown in Fig. 2.6

### 2.2.1. Horizontal deflection circuit

Horizontal deflection circuit is formed by H-Drive, diode modulator and High voltage feedback circuit. The detail circuit is shown in Fig. 2.7.

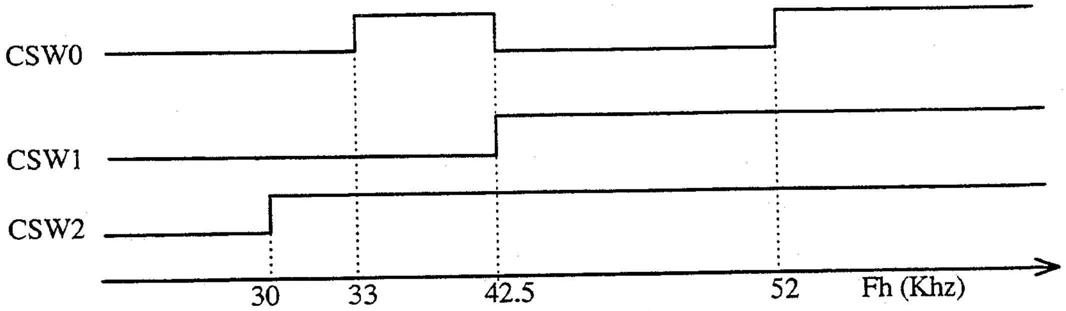
The Horizontal deflection circuit is a diode modulation type. Q506 is the deflection output transistor. T501 is drive transformer and Q505 is drive switching transistor. The driving condition of Q506 is controlled by Q504.

C517 and C568 are resonance capacitors which are used to generate H-Voltage.

L503 and L511 are linearity coil. When fH < 40 kHz, only L503 is used to maintain horizontal linearity. For fH > 40 kHz, RY501 will turn on, L503 and L511 become parallel to maintain linearity. RY501 is an electrical switch controlled by CPU via CSW1 signal.

The High-Voltage feedback circuit operates by connecting feedback voltage (VR502) to error amplifier at pin 2 of IC502. This error amplifier will control the On/Off ratio of IC502, therefore +B voltage is being controlled and high voltage become constant.

C515, C514, C553, C516 are called S-correction capacitor (CSW). They are controlled by CSW signals according to frequency of horizontal sync input (fH). Basically, lower fH needs higher CSW. Q509, Q508, Q534 are switched depends on fH as follows:-



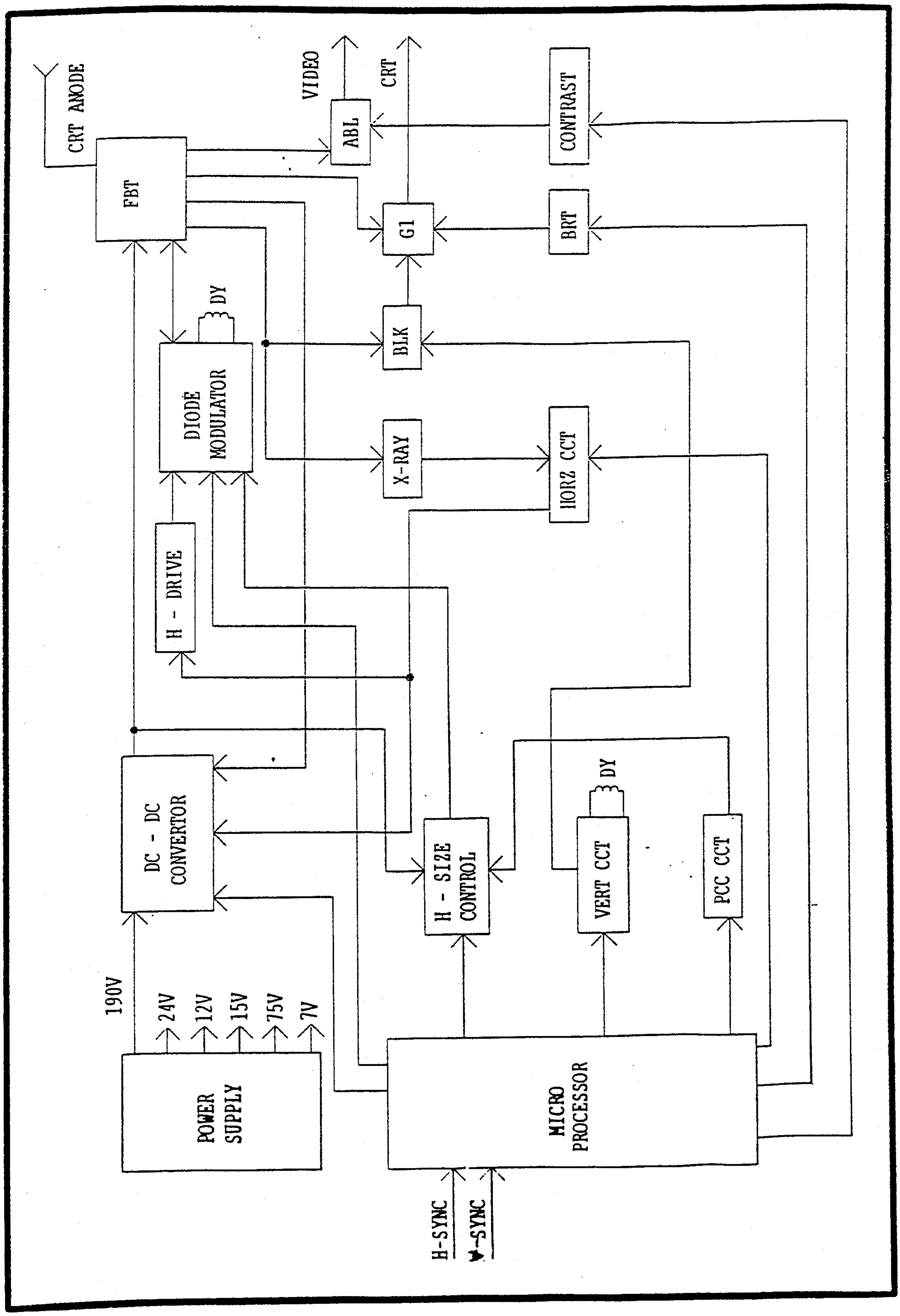

CRT ANODE
FBT
VIDEO
ABL
CRT
CONTRAST
G1
BRT
DY
BLK
DIODE MODULATOR
X-RAY
HORZ CCT
H - DRIVE
DC - DC CONVERTOR
H - SIZE CONTROL
DY
VERT CCT
PCC CCT
190V
24V
12V
15V
75V
7V
POWER SUPPLY
MICRO PROCESSOR
H-SYNC
V-SYNC

FIG 2.6 : BLOCK DIAGRAM OF DEFLECTOR CIRCUIT

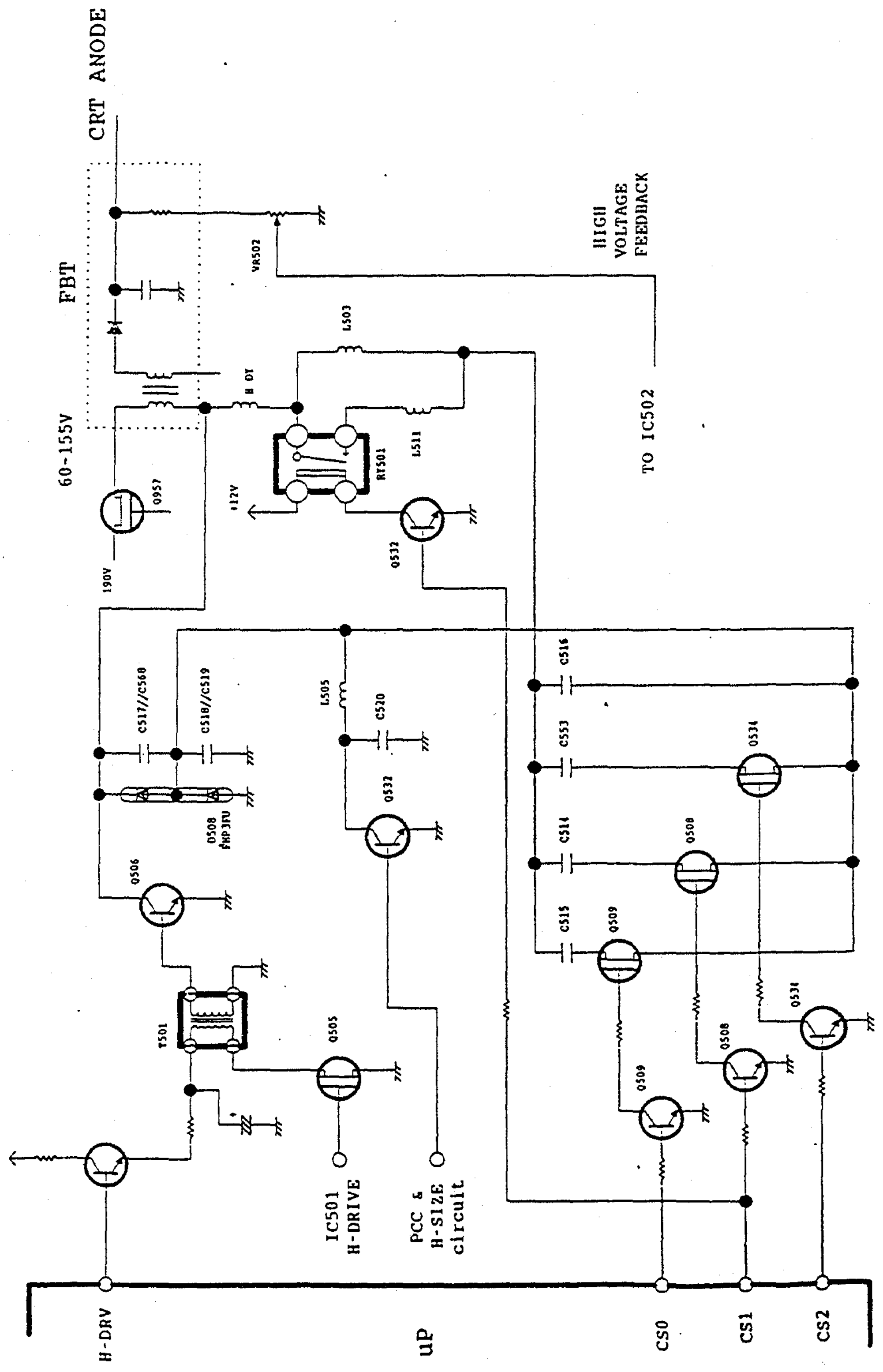

CRT ANODE
FBT
60-155V
HIGH VOLTAGE FEEDBACK
TO IC502
VR502
L503
H DY
L511
RT501
+12V
Q957
190V
Q532
C516
C517//C568
C518//C519
L505
C520
C553
Q534
C514
Q508
D508 FMP3FU
Q532
C515
Q509
Q506
T501
Q505
Q509
Q508
Q534
+15V
IC501 H-DRIVE
PCC & H-SIZE circuit
H-DRV
uP
CS0
CS1
CS2

FIG 2.7 : HORIZATIONAL DEFLECTION CIRCUIT

### 2.2.2. High voltage safety circuit or X-Ray circuit

The following diagram shows the high voltage safety circuit.

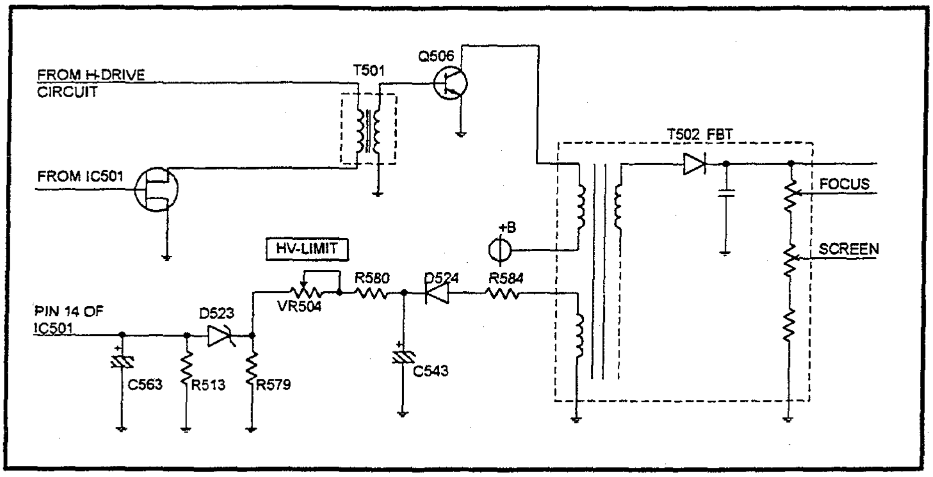

FROM H-DRIVE CIRCUIT
T501
Q506
T502 FBT
FROM IC501
FOCUS
+B
SCREEN
HV-LIMIT
R580
D524
R584
VR504
PIN 14 OF IC501
D523
C563
R513
R579
C543

FIG 2.8 : HIGH VOLTAGE SAFETY CIRCUIT

Safety circuit described below are equipped to prevent abnormal increase of the high voltage that may cause X-RAY of harmful level. No modification should be applied to the high voltage supply and safety circuits.

The upper limits for the high voltage and the beam current are determined by considering the X-RAY RADIATION LIMIT CURVE OF CRT. The excessive high voltage and the beam current can be detected from the 3rd winding voltage at pin 4 of FBT. It is connected to the cathode of D523 through HV-LIMIT potentiometer VR. When the cathode voltage of D523 exceeds the zener current starts to flow and it charges up C563. The voltage C563 is connected to the X-RAY protection circuit at pin 14 of IC501. When the voltage of 14 pin exceeds 0.6V, IC501 stop to oscillate until power off. As a result, the horizontal deflection stops and the high voltage goes down.

### 2.2.3. Blanking circuit

Blanking circuit consists of Horizontal and Vertical blanking as shown in Fig.2.9

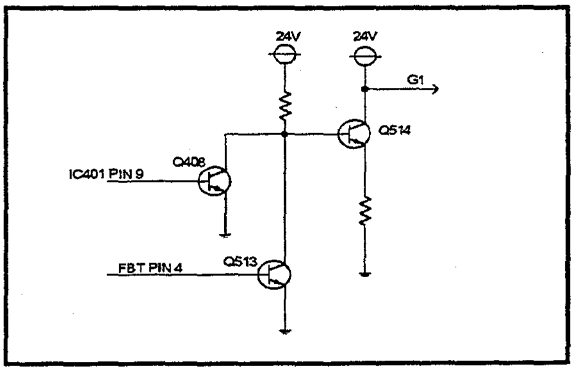

24V
24V
G1
Q514
Q408
IC401 PIN 9
FBT PIN 4
Q513

FIG 2.9 :BLANKING CIRCUIT

Vertical blanking comes from pin 9 of vertical IC and horizontal blanking comes from 3rd winding voltage at pin 4 of FBT. This two blanking signals are combined by Q408 and Q513 and then superimpose into G1 voltage through Q514 and C522.

### 2.2.4. Brightness circuit

The brightness control voltage is supplied from CPU. The brightness control is performed by adjusting the G1 voltage through amplifier Q520.

### 2.2.5. ABL and contrast circuit

ABL and contrast circuit are explained together because their operation are related to each other.

The contrast control voltage is supplied from CPU and amplified by amplifier Q521 and Q522 before connecting to CRT circuit. The contrast voltage will change the beam current of CRT, thus change the luminance of picture.

ABL stands for Auto-Beam Limited. This circuit is used to limit the maximum beam(Ib) current of CRT. When beam current increase, voltage at pin 10 of FBT will reduce. If pin 10 voltage is less than -0.7V, Q515 will turn on to pull down contrast voltage, thus the beam current can be control. The maximum beam current is determined by R545.

### 2.2.6. Horizontal circuit

Horizontal circuit consists of sync polarity detector circuit, phase shift circuit, H-OSC circuit, AFC circuit, H-drive duty cycle control circuit and X-Ray circuit. All these circuits operation are done by IC501 (LA7852) with some external components. For details application, please refer to SANYO sync deflection IC LA7852 application note.

The block diagram of IC501 is shown in Fig 2.10

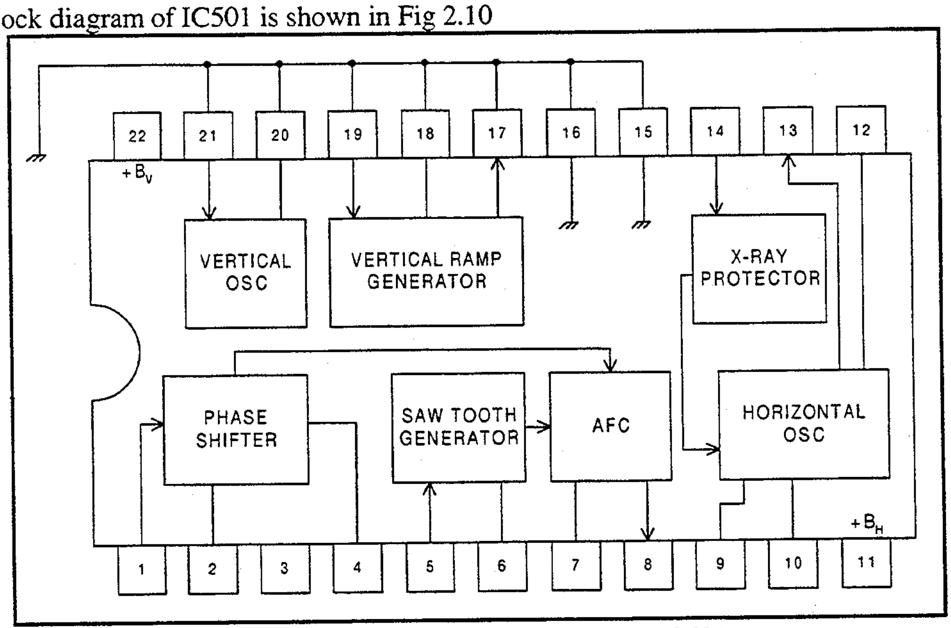


FIG 2.10 : BLOCK DIAGRAM OF IC501

(1) H-Sync biasing input
(2) H-Phase time constant
(3) NC
(4) Synchronize pulse width time constant
(5) Flyback pulse input
control
(6) Sawtooth generator capacitor
(7) Sawtooth comparison voltage capacitor

(8) AFC output
(9) H-OSC time constant
(10) Discharge resistor
(11) 12V
(12) H-Out duty cycle
(13) H-Out pulse
(14) X-Ray protection

## 2.2.7. Vertical deflection circuit

The vertical deflection is performed by SANYO IC LA7837 and some surrounding components as shown in Fig 2.1.1.

The IC pin configuration is shown in Fig 2.12.

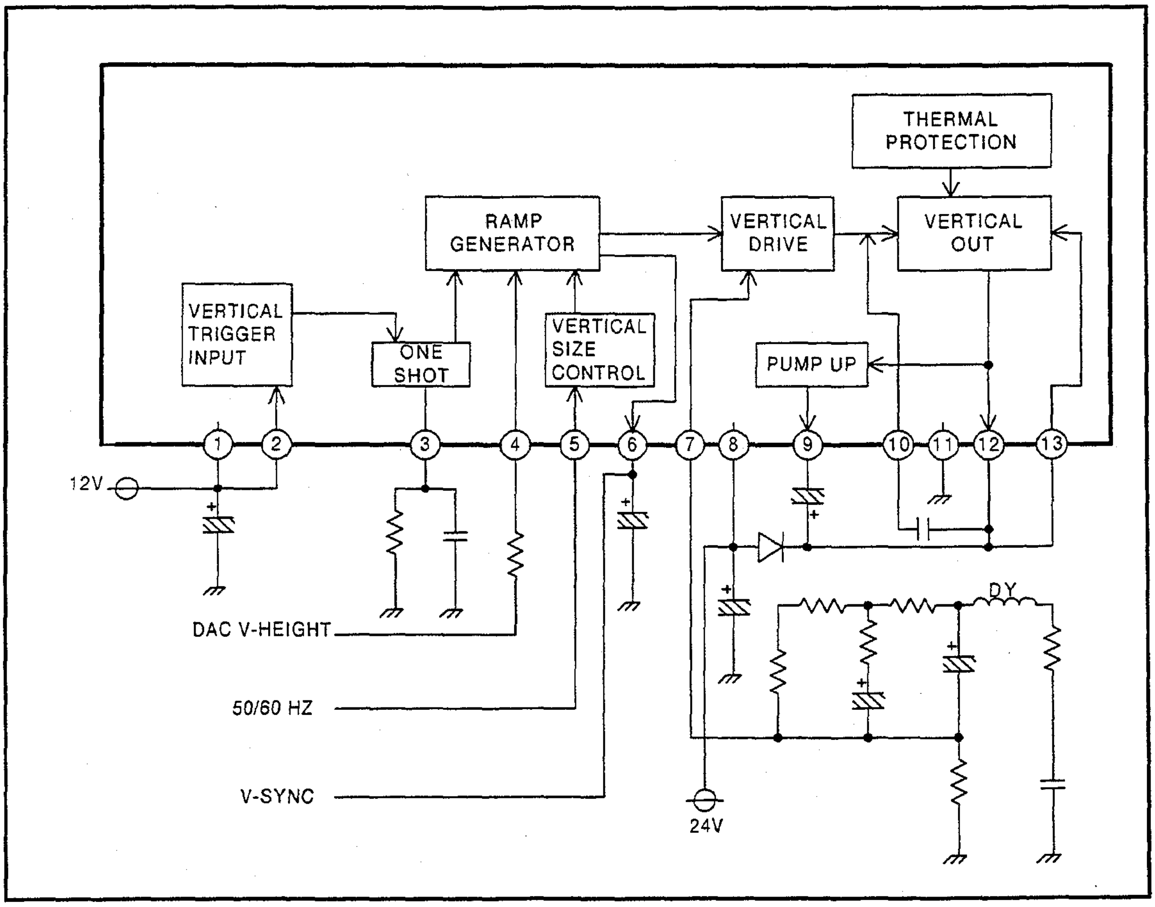

THERMAL PROTECTION
RAMP GENERATOR
VERTICAL DRIVE
VERTICAL OUT
VERTICAL TRIGGER INPUT
ONE SHOT
VERTICAL SIZE CONTROL
PUMP UP
1
2
3
4
5
6
7
8
9
10
11
12
13
12V
+
DAC V-HEIGHT
50/60 HZ
V-SYNC
24V
DY

Fig. 2.11 : VERTICAL DEFLECTION CIRCUIT

| Pin | | Function |
|---|---|---|
| Number | Name | |
| 1 | Vcc 1 | Input and driver stages positive power supply input |
| 2 | IN | Vertical trigger input |
| 3 | TC | One-shot time constant |
| 4 | IRAMP | Ramp waveform control capacitor |
| 5 | 50/60 | 50/60 Hz vertical amplitude control input |
| 6 | CRAMP | Ramp waveform integration capacitor |
| 7 | FB | Vertical output negative feedback input |
| 8 | VCC7 | Pump-up circuit positive power supply input |
| 9 | CPUMP | Pump-up capacitor |
| 10 | CFLIT | High-frequency stability filter capacitor |
| 11 | GND | Power supply ground |
| 12 | OUT | Vertical deflection output |
| 13 | Vcc 12 | Output stage positive power supply input |

Fig 2.12 : LA7837 pin configuration

The vertical deflection sawtooth waveform is generated inside IC401 by charging and discharging the C403 at pin 6. The charging current of this capacitor is determined by current drawn from pin 4. Pin 4 of IC401 is connected to lip, "V-Size" DAC output the signal "V-Size" can control the amplitude of the ramp-voltage across C403 or vertical deflection current.

There is no vertical oscillation circuit in this application circuit. The V-sync signal is used as triggering signal to discharge C403. In case of no-sync signal, CPU will generates Quasi-V-Sync signal to make free running condition.

The DC and AC feedback signals are fed to 7 pin of IC401. The DC feedback signal is fed through R416 and R418 while the AC feedback signal which is for the amplitude control of deflection current is fed through R417, R416, R418, R419 and C410 form the linearity correction circuit. The amount of correction is determined by the R419/C410 time constant and the R416/R418 bleeder resistor ratio.

For more detail explanation, please refer to SANYO IC LA7837 technical information report.

## 2.2.8. PCC control circuit

Fig 2.13 shows the PCC control circuit.

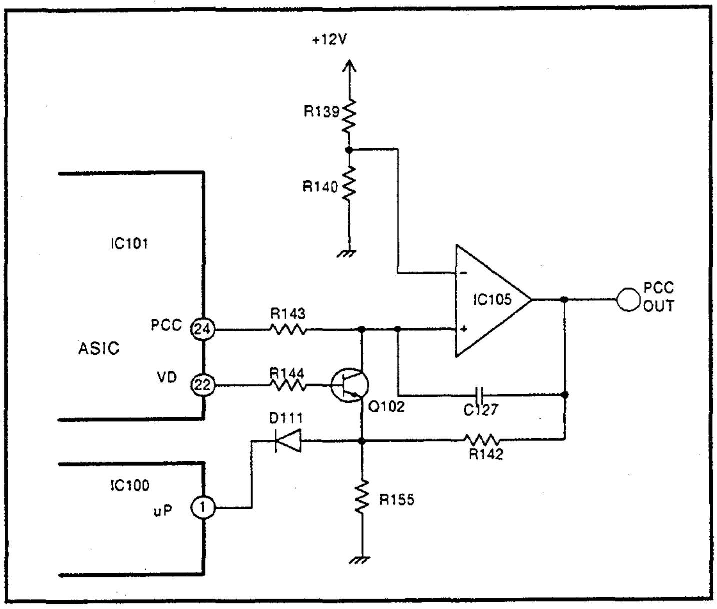

+12V
R139
R140
IC101
ASIC
PCC
24
VD
22
R143
R144
Q102
D111
C127
R142
R155
IC105
-
+
PCC OUT
IC100
uP
1

FIG 2.13 PCC CONTROL CIRCUIT

The PCC waveform is generated by ASIC (IC101).

IC105 works as the gain amplifier. The vertical parabolic waveform is amplified by controlling the PCC gain control signal from µp.

## 2.2.9. H-Width control signal

The circuit diagram is shown in Fig 2.14. The H-size control circuit is controlled by changing IHW. IHW is proportional to picture size. (IHW ∝ H-Size)

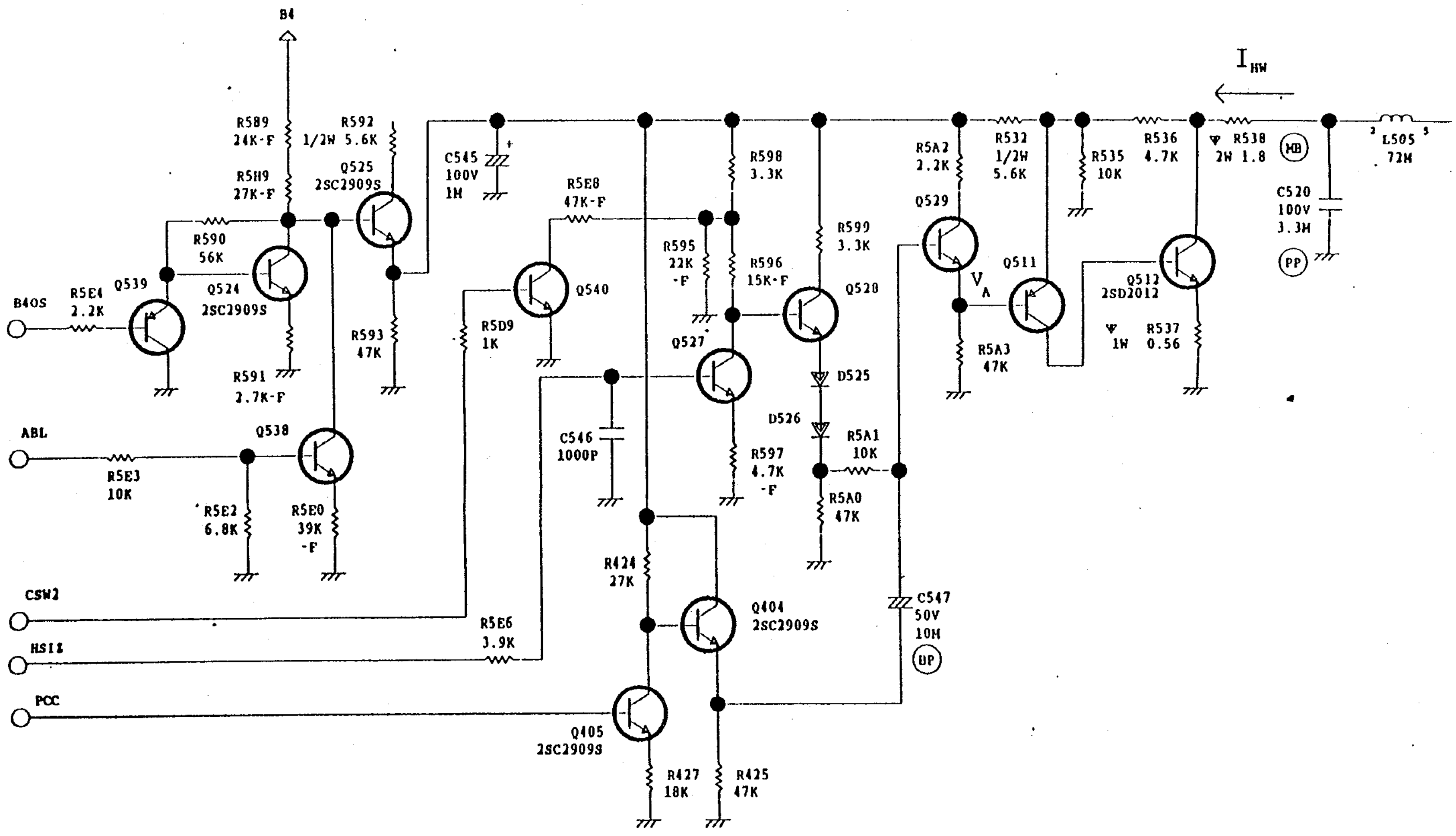

B4
R589
24K-F
R592
1/2W 5.6K
R5H9
27K-F
Q525
2SC2909S
R590
56K
Q524
2SC2909S
Q539
R5E4
2.2K
B40S
R591
2.7K-F
R593
47K
ABL
R5E3
10K
Q538
R5E2
6.8K
R5E0
39K
-F
CSW2
HS1I
PCC
C545
100V
1M
R5E8
47K-F
Q540
R5D9
1K
R5E6
3.9K
C546
1000P
R598
3.3K
R595
22K
-F
R596
15K-F
Q527
R597
4.7K
-F
R424
27K
Q404
2SC2909S
Q405
2SC2909S
R427
18K
R425
47K
R599
3.3K
Q528
D525
D526
R5A1
10K
R5A0
47K
C547
50V
10M
UP
R5A2
2.2K
Q529
$V_A$
R5A3
47K
R532
1/2W
5.6K
Q511
R535
10K
R536
4.7K
Q512
2SD2012
R537
1W 0.56
R538
2W 1.8
MB
$I_{HW}$
L505
72M
C520
100V
3.3M
PP

FIG 2.14 : H-SIZE CONTROL CIRCUIT

The DC biasing voltage for H-Size circuit is called +C. +C voltage is linearity proportional to H-frequency so that the picture width is approximately constant at any horizontal frequency. The +C voltage gain is being controlled by µp B40S output through +B voltage. The relation between +B and +C is shown in Fig 2.15.

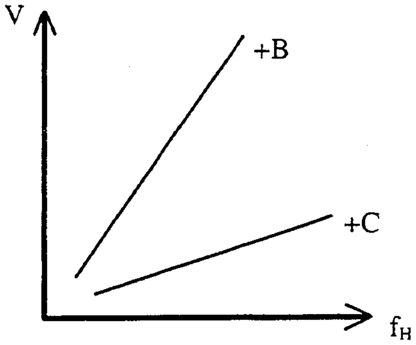


Fig 2.15 : +B and +C vs $f_H$

The parabolic waveform from PCC circuit is connected to the base of Q529 through AC coupling capacitor C547. This will modulate the emitter voltage of Q529. As the result, IHW is modulated to parabolic waveform for compensating the side pincushion distortion.

In H-Voltage deflection circuit, the +B voltage is controlled to keep the high voltage constant. This means the +B voltage is changed according to beam current (brightness and contrast of picture), and the change of +B voltage causes the change of picture width. To avoid the change of picture width, the change of beam current is sensed from FBT's ABL pin. The ABL voltage will control the base voltage of Q525 and finally the +C voltage. As the result, the picture width is maintain constant.

## 2.3. *Control circuit*

The control circuit is resident in the PCB-MAIN. This circuit provides the following function: -

1. Auto-tracking
2. Picture size and position control
3. Adjustment data storage
4. Sync signal detection
5. Clamp pulse generation for the video pre-amplifier
6. On Screen Display to provide the user-friendly environment

This control block consists of mainly 6 main parts:

1) µP - IC100
2) OSDC - On Screen Display Controller (IC 106)
3) E$^2$PROM - IC103
4) ASIC - IC101
5) PCC Circuit - IC105
6) Reset Circuit - IC102

### 2.3.1. Digital and Analog control circuit.

The Digital and Analog control circuit comprises of a microprocessor IC100 and ASIC IC101 . The function of the microprocessor is to process Horizontal and vertical signal input to the monitor. Once the video mode is determined by the microprocessor , control signals are send to the deflection and the video circuit for nominal operation.

The signals are defined either as Digital or Analog. Digital signals send directly by the microprocessor are used to control the transistor switch for linearity, power management and others. Analog signals are send through the ASIC by microprocessor to control the picture size, centering , East-West and Keystone control as well as color temperature control.

The interfacing between microprocessor and the On Screen Display IC, IC106 allows user-friendly interface to control picture performance from the front panel controls.

### 2.3.2. Sync Processor

The monitor must be able to accept separate , composite sync signals . IC 107 and IC108 in the PWB-MAIN perform the separation of composite Sync into separate sync . It also allows separate sync to pass through to the microprocessor.

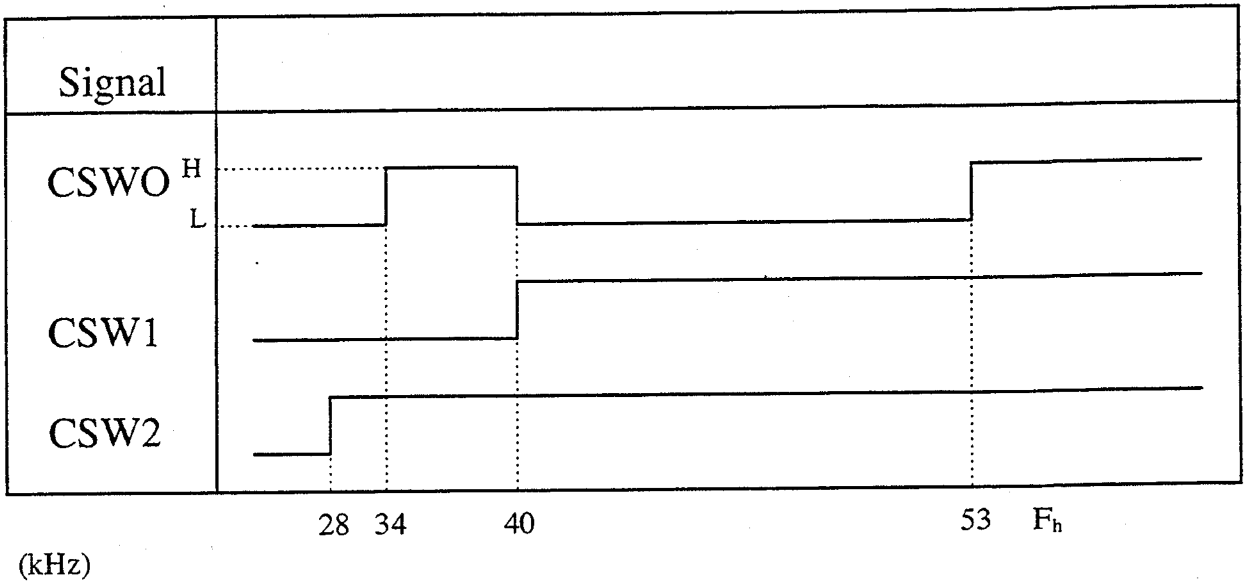
IC302 in the PWB-SYNC control the clamp signal to the video IC . User can select either front or back porch. So that when the input signal is separate sync with Sync-on-green signal , user can select the back porch clamp to clear the screen of green background.

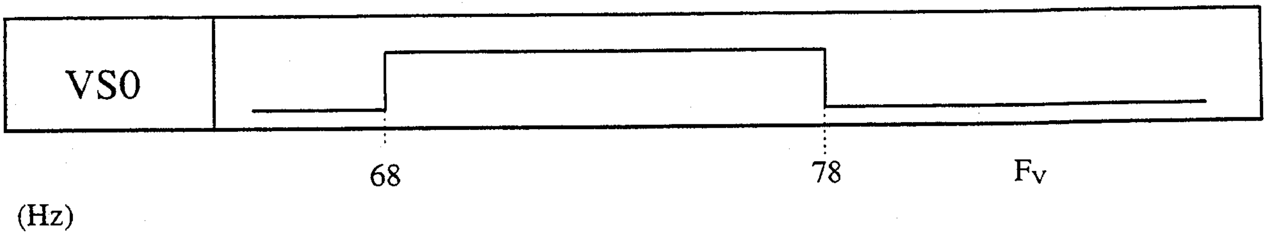
### 2.3.3. $E^2$PROM

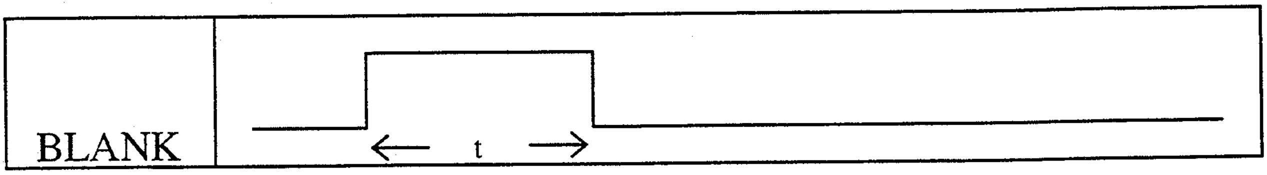
A 4K bits ROM for storing the user's adjustment data based on their own preference. Part of the ROM contains the factory data that may be transferred to the user data area whenever the user reset the monitor to obtain the initialize size of the picture.

### 2.3.4. OSDC (On Screen Display Controller)

This controller generates icons on the display of 10 rows by 24 columns to provide user friendly environment. There are 128 alphanumeric characters or graphic symbols provided by its own character ROM generator, Please refer to the data sheets on LSC 4321P by MOTOROLA SEMICONDUCTOR on its application notes and data.


Signal
CSWO
H
L
CSW1
CSW2
28
34
40
53
Fh
(kHz)


VS0
68
78
Fv
(Hz)



Note : "t" is variable depending on timing.

| | |
|---|---|
| SUSP | "LOW" at H-SYNC OFF |
| SHDW | "LOW" at V and H-SYNC OFF |

## 2.4. *Video Circuit*

### 2.4.1. Video amplifier

(1) The circuit of video amplifier are in PCB-CRT

(2) There are three video amps for RGB inputs which have identical circuit configuration. For simplification, the green-channel amp. will be explained in this chapter.

(3) This amplifier is composed of the pre-amplifier section and the main amplifier section. The video signal (0.7 Vp-p STD) is amplified to approx. 2 Vp-p in the pre-amplifier section and is amplified again to approx. 35 Vp-p at the main-amplifier section.

(4) The input is fed to 11 pin of IC200 via termination resistor R2G0 and coupling capacitor C2G0. The gain of IC200 is controlled by the DC voltage of 14 pin. The higher voltage of 14 pin makes the gain of IC200 larger. This IC also provides the function of the black level clamp. The voltage level of 16 pin is fixed, which is brightness control for RGB signal.

(5) The output signal of IC200 is connected to the main-amplifier (Q6G3 and Q6G4) via emitter follower Q6G2.

(6) To display a pure white image on screen, both the DC level and the amplitude of video output signal be adjusted as the 3 guns characteristics of CRT's are not identical. The DC level of cathode can be adjusted by VR6R0 (R-CUT OFF), VR6G0 (G-CUT OFF) and VR6B0 (B-CUT OFF).

### 2.4.2. OSD amplifier

During OSD period, the emitter follower Q6G1 is working instead of Q6G2. Q6G2 is cut off by IC200 output (25 pin) according to the blanking signal (1 pin) of IC200. The OSD video signal and blanking signal is generated by OSD IC which is located in PWB-MAIN.

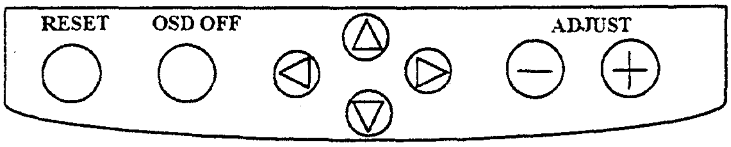
# Chapter Three : SD570*C/CSG ADJUSTMENT PROCEDURE

**SD5700/02/03/04/07C (OWN BRAND)**
**SD5703/04CSG (CSG OWN BRAND)**

## 3.1 EQUIPMENTS

| | |
|---|---|
| 1. Signal generator A | Mitsubishi MIN-600 or equivalent. |
| 2. Signal generator B | Astrodesign VG819 or equivalent. |
| 3. DC voltage meter | 150V class0.5 or Digital voltage meter |
| 4. High voltage meter | 30KV range class0.5 |
| 5. Luminance meter | Minolta color analyzer |
| 6. AC voltage meter | 150V/300V class0.5 |
| 7. Voltage converter | Adjustment range over AC260V |
| 8. Double scale ruler | For size adjustment, distortion measurement |
| 9. Insulation resistance tester | Yokogawa TYPE3213 or equivalent |
| 10. Withstanding voltage tester | Kikusui MODEL865A or equivalent |
| 11. Frequency counter | Iwatsu SC-7101 or equivalent |
| 12. Digital power meter | Hioki MODEL 3183 |
| 13. Oscilloscope | 100MHz bandwidth above |

## 3.2 OUTLINE OF THE FRONT PANEL OF THE MONITOR SET



## 3.3 CHAMBER FIELD

Magnetic Field

| Model | SD5707C/00C/04CSG | 5702C | 5703CSG-SI | 5703CSG-HK |
|---|---|---|---|---|
| Horizontal | 0.000mT | 0.000mT | 0.000mT | 0.000mT |
| Vertical | 0.040mT | -0.052mT | -0.010mT | 0.030mT |

## 3.4 INITIAL VR SETTING

| Item | Description | min | center | max |
|---|---|---|---|---|
| VR 502 | HV-ADJ | √ | | |
| VR 504 | HV-LIMIT | √ | | |
| VR 6R0 | R CUT-OFF | √ | | |
| VR 6G0 | G CUT-OFF | √ | | |
| VR 6B0 | B CUT-OFF | √ | | |
| SCREEN VR | SCREEN | √ | | |
| FOCUS | FOCUS | | √ | |

Note : "min" value at VR is at anti-clockwise direction.

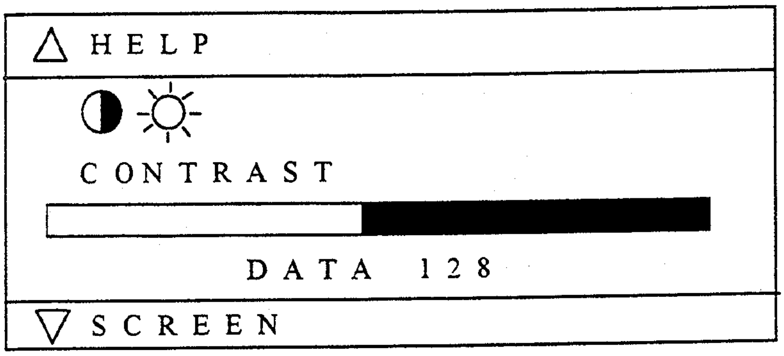
## 3.5 ADJUSTMENT MODE

There are 3 adjustment modes in this monitor.

(a) Normal mode
(b) Factory mode
(c) Remote mode

(a) Normal mode

The normal mode is opened for end user operation and it comes with the OSD (On Screen Display) to provide a better user friendly environment. The user will come in touch with functions like contrast, brightness, size, position, side bow, keystone, R-gain, B-gain, color mode, power save.clamp position through the adjustment buttons on the front panel. The normal mode OSD will have format shown below :



△ HELP

CONTRAST

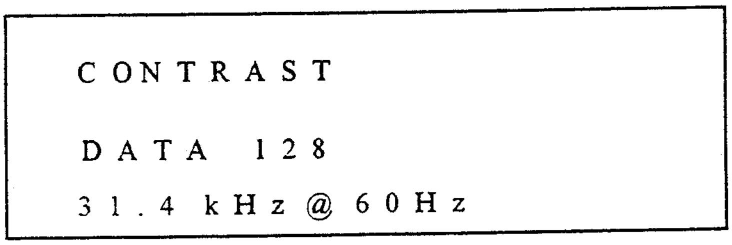
DATA 128

▽ SCREEN

Pressing △ or ▽ select the pages via the OSD. The ◁ or ▷ allow the user to select the adjustment items within a page. By using + or − it will change the data in CPU RAM and DAC output data so as to reflect the changes seen by the user. The CPU RAM data will then be written into EEPROM after adjustment action has completed.

(b) Factory mode

The factory mode has some additional items on top of the normal mode. These items are meant for factory pre-adjustment on the monitor before it is shipped to the customer. The factory mode OSD has the format as shown :



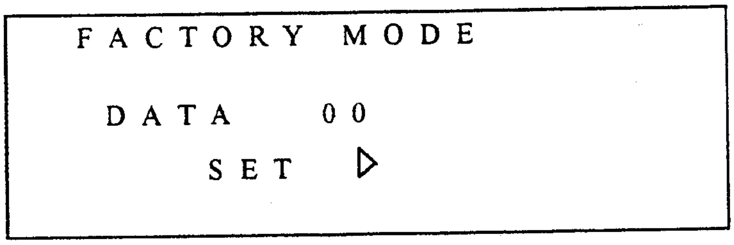
CONTRAST

DATA 128

31.4 kHz @ 60Hz

To access to factory mode through the front panel,

1. Power off the monitor.
2. Press and hold "RESET" button before power on.
3. The following Factory Mode Page will appear on the screen :



FACTORY MODE

DATA 00

SET ▷

4. Press ⊟ to decrease DATA=255 or less.
5. Next, press ⊞ to increase DATA=05.
6. Press ▷ to enter factory mode, at this moment, the monitor is automatically in this mode even though the power is off.

To exit from factory mode into normal mode,

1. Choose the "FACTORY MODE" page using △ or ▽.
2. Press ⊞ to increase DATA=10.
3. Press ▷ to exit factory mode

| ITEMS DESCRIPTION | ⊟ | ⊞ | NORMAL MODE | FACTORY MODE | REMOTE MODE |
|---|---|---|---|---|---|
| 1. Contrast | For Adjustment | | • | • | • |
| 2. Brightness | | | • | • | • |
| 3. H-Position | | | • | • | • |
| 4. H-Size | | | • | • | • |
| 5. V-Position | | | • | • | • |
| 6. V-Size | | | • | • | • |
| 7. Side Bow | | | • | • | • |
| 8. KeyStone | | | • | • | • |
| 9. Rotation | (OPTIONAL) | | • | • | • |
| 10. R Gain | For Adjustment | | • | • | • |
| 11. B Gain | | | • | • | • |
| 12. Color Mode | Standard,Broadcast,Publish | | • | • | • |
| 13. Power Save | Off | On | • | • | • |
| 14. Clamp Position | Front | Back | • | | |
| 15. Help | Frequency Infor. Display | | • | | |
| 16. Factory Mode | Factory Entry | | | • | • |
| 17. B4OSC | For Adjustment | | | • | • |
| 18. HOSC | | | | • | • |
| 19. HDRV | | | | • | • |

Figure 1

(c) Remote mode

The remote mode has the same number of adjustment items as in the factory mode, the only difference is that it is accessed through a RS232C cable from a remote PC. It is to be used for auto-adjustment machine.

## 3.6 ADJUSTMENT

Unless otherwise specified herein. AC input voltage must follow the table listed below :

| Model | AC Voltage | Frequency |
|---|---|---|
| SD5707C | 100V | 60Hz |
| SD5700C | 120V | 60Hz |
| SD5702C | 240V | 50Hz |
| SD5703CSG | 230V | 50Hz |
| SD5704CSG | 230V | 50Hz |

After initialization, monitor is in factory mode, otherwise follow the procedure listed under "Factory Mode" on Pg. 3 to re-enter into the factory mode.

### 3.6.1 Rough Adjustment

*(1) H-Free Run Adjustment*

1. Connect the Frequency Counter probe on the red lead wire across PWB-MAIN to horizontal deflection yoke.
2. Input 31.5 kHz (VGA480L) signal with RGB Off.
3. Adjust Screen VR so that back raster just appears.RGB On.
4. Press △ or ▽ to select the OSD to "HOSC".
5. Press "RESET" Switch to activate Free Run Condition.
6. Use ⊞ or ⊟ to adjust the data so that the frequency is within the specification as shown below.
7. Repeat the adjustment for the next 2 frequencies.

| Signal | OSD | Spec |
|---|---|---|
| 31.5 kHz | HOSC LOW | 31.5 ± 0.5 kHz |
| 47.5 kHz | HOSC MID | 47.5 ± 0.5 kHz |
| 63.5 kHz | HOSC HIGH | 63.5 ± 0.5 kHz |

*(2) B4-Free Run Adjustment*

1. Connect the Frequency Counter to the TP-1.
2. Input 31.5 kHz (VGA480L) signal.
3. Press △ or ▽ to select the OSD to "B4OSC LOW".
4. Press "RESET" Switch to activate Free Run Condition.
5. Use ⊞ or ⊟ to adjust the frequency to 32.7 kHz ± 0.5 kHz.
6. Press △ or ▽ to deactivate the free-run condition.

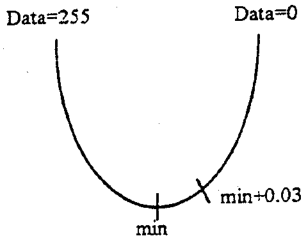
*(3) HV Adjustment*

1. Connect High Voltage Probe to CRT Anode (Caution : Electric Shock!!)
2. Input frame pattern,and ensure that H-size is at 260mm±10mm at 63.5kHz
3. OSD off.
4. Adjust VR502 to get HV=24.8 kV ± 0.5 kV.

| Signal | Location | Spec |
|---|---|---|
| 63.5 kHz | CRT Anode (VR502) | ± 0.5 kV |

5. Adjust Screen VR so that back raster just appear !!

*(4) H-Drive Adjustment*



1. Connect voltmeter to TP-+B (+) & Gnd (-).
2. Input 31.5kHz (VGA480L) signal and RGB on .
3. Adjust the H-Size to 260mm ± 10mm.
4. Press △ or ▽ to select the OSD to "HDRV".
5. OSD off.
6. Use ⊟ to reduce the voltage to its minimum at TP-+B (+).
7. Use ⊟ to increase an additional of 0.03V from the min. voltage.
8. Repeat above procedure for the next 2 frequencies.

| Signal | OSD | Spec |
|---|---|---|
| 31.5 kHz | HDRV LOW | min ≤ TP-+B ≤ min+0.03V |
| 47.5 kHz | HDRV MID | min ≤ TP-+B ≤ min+0.03V |
| 63.5 kHz | HDRV HIGH | min ≤ TP-+B ≤ min+0.03V |

*(5) Setting for aging condition*

1. Remove the signal cable.
2. Adjust the SCREEN VR to get back raster luminance for aging condition.

### 3.6.2 H-Free Run

1. Connect the Frequency Counter probe on the red lead wire across PWB-MAIN to horizontal deflection yoke.
2. Input 31.5 kHz (VGA480L) signal with RGB Off.
3. Adjust Screen VR so that back raster just appears.RGB On.
4. Press △ or ▽ to select the OSD to "HOSC".
5. Press "RESET" Switch to activate Free Run Condition.
6. Use ⊞ or ⊟ to adjust the data so that the frequency is within the specification as shown below.
7. Repeat the adjustment for the next 2 frequencies.

| Signal | OSD | Spec |
|---|---|---|
| 31.5 kHz | HOSC LOW | 31.5 ± 0.2 kHz |
| 47.5 kHz | HOSC MID | 47.5 ± 0.2 kHz |
| 63.5 kHz | HOSC HIGH | 63.5 ± 0.2 kHz |

8. Repeat the procedure to check 3 reference points' frequencies are within tolerances.

### 3.6.3 B4 Free Run

1. Connect the Frequency Counter to the TP-1.
2. Input 31.5 kHz (VGA480L) signal.
3. Press △ or ▽ to select the OSD to "B4OSC LOW".
4. Press "RESET" Switch to activate Free Run Condition.
5. Use ⊞ or ⊟ to adjust the frequency to 32.7 ± 0.2kHz.
6. Press △ or ▽ to deactivate the free-run condition.

### 3.6.4 HV Adjustment

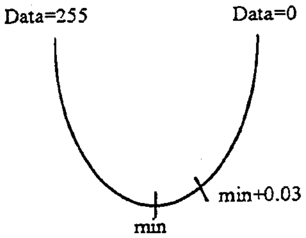
1. Connect High Voltage Probe to CRT Anode (Caution : Electric Shock !!)
2. Input frame pattern,ensure that H-size is at 260mm±10mm at 63.5 kHz.
3. OSD off.
4. Adjust VR502 to get HV=24.8 kV ± 0.2 kV.

| Signal | Location | Spec |
|---|---|---|
| 63.5 kHz | CRT Anode (VR502) | ± 0.2 kV |

5. Adjust Screen VR so that back raster just appear !!

### 3.6.5 H-Drive Adjustment

1. Connect voltmeter to TP-+B (+) & Gnd (-).
2. Input 31.5kHz (VGA480L) signal and RGB on.
3. Adjust the H-Size to 260mm ±10mm .
4. Press △ or ▽ to select the OSD to "HDRV".
5. OSD off.
6. Use ⊟ to reduce the voltage to its minimum at TP-+B (+).
7. Use ⊟ to increase the voltage to its specification.
8. Repeat above procedure for the next 2 frequencies.



| Signal | OSD | Spec |
|---|---|---|
| 31.5 kHz | HDRV LOW | min ≤ TP-+B ≤ min+0.03V |
| 47.5 kHz | HDRV MID | min ≤ TP-+B ≤ min+0.03V |
| 63.5 kHz | HDRV HIGH | min ≤ TP-+B ≤ min+0.03V |

### 3.6.6 HV-Limit

1. Connect voltmeter to TP-X (+) & Gnd (-).
2. Input 63.5kHz.
3. RGB off and OSD off.
4. Adjust VR504 to 5.8V.

| Signal | Location | Spec |
|---|---|---|
| 63.5 kHz | VR504 | ±0.05V |

### 3.6.7 Video Cut-off Adjustment

1. Input 31.5 kHz signal (VGA480L).
2. RGB off.
3. Press △ or ▽ to select the OSD to "CONTRAST".
4. Ensure that the BRIGHTNESS is at its center value when "CONTRAST" is adjusted.
5. Press "OSD OFF" switch to cancel the OSD.
6. Adjust Screen VR so that the back raster is 1 cd/m$^2$ approximately.
7. Adjust VR6R0(R-bias), VR6G0(G-bias), VR6B0(B-bias) to

| Models | SD5700C | SD5707C/02C/03CSG/04CSG |
|---|---|---|
| x | 0.300±0.010 | 0.283±0.010 |
| y | 0.305±0.010 | 0.297±0.010 |

8. Adjust Screen VR to 0.4± 0.1 cd/m$^2$.
9. Check that x and y values shown above are within the tolerances.

### 3.6.8 Video drive-Adj ( STANDARD 9300K)

1. Input 31.5 kHz signal (VGA480L)
2. Switch to green window signal (approximately 80 mm x 80 mm).
3. Press △ or ▽ to select the OSD to "COLOR MODE".
4. Press + or − to select "STANDARD 9300K".
5. Press △ or ▽ to select the OSD to "CONTRAST".
6. Press "OSD OFF" switch to cancel the OSD.
7. Press + or − to set the green window to 100 ± 2 cd/m$^2$.
8. Press △ or ▽ switch to activate the OSD.
9. Switch to white window signal (approximately 80 mm x 80 mm).
10. Press △ or ▽ to select the OSD to "R" gain or "B" gain and together with "OSD OFF", use + or − to adjust

| Models | SD5700C | SD5707C/02C/03CSG/04CSG |
|---|---|---|
| x | 0.300±0.005 | 0.283±0.005 |
| y | 0.305±0.005 | 0.297±0.005 |

11. Make sure that luminance is more than 110 cd/m$^2$ at full white pattern.

### 3.6.9 Video drive-Adj ( BROADCAST 6500K)

1. Input 31.5 kHz signal (VGA480L).
2. Switch to white window signal (approximately 80 mm x 80 mm).
3. Press △ or ▽ to select the OSD to "COLOR MODE".
4. Press + or − to select "BROADCAST 6500K".
5. Press △ or ▽ to select the OSD to "R" gain or "B" gain and together with this, use + or − to adjust

$$x = 0.313 \pm 0.005$$
$$y = 0.329 \pm 0.005$$

6. Make sure that luminance is more than 110 cd/m$^2$ at full white pattern.

### 3.6.10 Video drive-Adj ( PUBLISH 5000K)

1. Input 31.5 kHz signal (VGA480L).
2. Switch to white window signal (approximately 80 mm x 80 mm).
3. Press △ or ▽ to select the OSD to "COLOR MODE".
4. Press ⊞ or ⊟ to select "PUBLISH 5000K".
5. Press △ or ▽ to select the OSD to "R" gain or "B" gain and together with "OSD OFF", use ⊞ or ⊟ to adjust

$$x = 0.336 \pm 0.005$$
$$y = 0.352 \pm 0.005$$

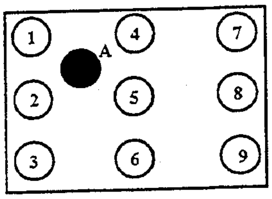
6. Make sure that luminance is more than 110 cd/m$^2$ at full white pattern.

### 3.6.11 Focus Adjustment

1. Input timing signal for

| SD5707C | SD5700C/02C/03CSG | SD5704CSG |
|---|---|---|
| 58.1kHz/72Hz | 61.35kHz/76Hz | 60.0kHz/75Hz |

2. Set to reverse and (normal,if required) "H" character mode.
3. Adjust Focus VR to best condition at pt A.
4. Check the focus for the rest of 9 check points indicated on the right side of the diagram.



Focus Check Point

### 3.6.12 Preset Adjustment

1. Set VGA (400L) Full white for all following adjustments.
2. Repeat the procedure "Side Bow/Keystone", "H-Size/Shift", and "V-Size/Shift" for other preset timings as indicated on the "Timing Chart and Signal Timing".

*Side Bow/Keystone Adjustment*

a. Press △ or ▽ to select the OSD to "SIDE-BOW".
b. Press ⊞ or ⊟ to adjust the PCC to approximately 0 mm.
c. Press △ or ▽ to select the OSD to "KEYSTONE".
d. Press ⊞ or ⊟ to adjust the Keystone to approximately 0 mm.

| Item | Signal | Spec |
|---|---|---|
| Side Bow | VGA 400L<br>Full White Signal | 1.5 mm P<br>0.0 mm B |
| Keystone | VGA 400L<br>Full White Signal | \|Top-Bottom\| < 1mm |

*H-Size/Position*

1. Press △ or ▽ to select the OSD to "H-SIZE".
2. Adjust ⊞ or ⊟ to give H-Size to 260 mm ± 4 mm.
3. Press △ or ▽ to select the OSD to "H-POSITION" .
4. Adjust ⊞ or ⊟ to center the picture horizontally from both left and right edge of the Bezel.

| H-POSITION | Left - Right |
|---|---|
| | ≤ 4 mm |

*V-Size/Shift*

1. Press △ or ▽ to select the OSD to "V-SIZE" .
2. Adjust ⊞ or ⊟ to give V-size to :

| Timing | 24.83 kHz | Other Presets |
|---|---|---|
| V-Size | 163 ± 4 mm | 195 ± 4 mm |

3. Press △ or ▽ to select the OSD to "V-POSITION" .
4. Adjust ⊞ or ⊟ to center the picture vertically from both top and bottom edge of the Bezel.

| V-POSITION | Top - Bottom |
|---|---|
| | ≤ 4 mm |

### 3.6.13 X-Ray Protector

1. Connect DC power supply to TP-X (+) and Gnd (-).
2. Apply DC 8 ± 0.05V between TP-X and Gnd via diode.
3. Ensure that picture disappeared.
4. Power off and power on again after 3 to 5s to recover the picture.

| Signal | Location | Spec |
|---|---|---|
| 63.5 kHz<br>Full White | TP-X | 8 ± 0.05V. |

### 3.6.14 Power Management

1. Input 31.5 kHz signal (480L).
2. Press △ or ▽ to select the OSD to "POWER SAVE" .
3. Press ⊞ to activate power management function.

*(a) Complete off Status*

1. Remove signal cable.

*2. Following this, an attention OSD will appear on the monitor to notify the user.

ATTN. NO SIGNAL.
CHECK INPUT SIGNAL
CONNECTION OR
POWER SAVE MODE
HAS BEEN ENABLED

*3. 60 sec later, above OSD will disappear and the following "POWER SAVE" OSD will shown on the monitor for another 10sec before entering Shutdown mode.

POWER SAVE

4. After 10 sec, observe status LED blinks at an interval of 1.5 sec continuously.

5. Check that power meter reads less than 8W :

| SD5707C | SD5700C | SD5702C | SD5703/04CSG |
|---|---|---|---|
| 100V | 120V | 240V | 230V |

6. Connect Signal Cable.
7. Observe monitor in normal operation.

*(b) Suspend Status*

1. Remove V sync.

*2. Following this, an attention OSD will appear on the monitor to notify the user.

```
ATTN. NO SIGNAL.
  CHECK INPUT SIGNAL
  CONNECTION OR
  POWER SAVE MODE
  HAS BEEN ENABLED
```

*3. 60 sec later, above OSD will disappear and the following “POWER SAVE” OSD will shown on the monitor for another 10sec before entering Suspend mode.

```
POWER SAVE
```

4. After 10sec,observe status LED blinks at an interval of 1.5 sec continuously.
5. Check power meter reads less than 13W :

| SD5707C | SD5700C | SD5702C | SD5703/04CSG |
|---|---|---|---|
| 100V | 120V | 240V | 230V |

6. Connect V sync.
7. Observe monitor in normal operation.

*(c) Stand By Status*

1. Remove H sync.

*2. Following this, an attention OSD will appear on the monitor to notify the user.

```
ATTN. NO SIGNAL.
  CHECK INPUT SIGNAL
  CONNECTION OR
  POWER SAVE MODE
  HAS BEEN ENABLED
```

*3. 60 sec later, above OSD will disappear and the following “POWER SAVE” OSD will shown on the monitor for another 10sec before entering Standby mode.

```
POWER SAVE
```

4. After 10 sec,observe status LED blinks at an interval of 1.5 sec continuously.

5. Check picture is off.
6. Connect H sync.
7. Observe monitor in normal operation.

In power management mode, the monitor has no picture.
N.B. (*) : This is only apply to normal mode.

*(d) Test on Normal Mode only !*

1. Press △ or ▽ to select the OSD to "POWER SAVE" .
2. Press ⊟ to de-activate power management function.
3. Remove H & V sync.
4. Check that Attention OSD message will display permanently on the screen in normal mode.

### 3.6.15 Checking Items

(a) Limit Over on Normal Mode only !

1. Input 74.6kHz/70Hz signal.
2. Observe the following OSD displayed in red background:

**ATTENTION**

**SIGNAL FREQUENCY**
**IS OUT OF RANGE**

**PLEASE CHANGE SIGNAL**
**TIMING**

(b) Reset Function

*(b-1) Preset Timing*

1. Ensure that the monitor is at normal mode.
2. Input VGA480L, perform some adjustments.
3. Press "RESET" switch on the front panel.
4. The following OSD message will appear indicating that the memory has been reset to factory data :

**MEMORY RESET**

5. Ensure that the picture is reset to the factory preset condition.
6. "RESET" action on "COLOR" page only reset the R,B-Gain of the selected color mode.

(c) Others

*(c-1) Contrast Reset*

1. Ensure that the monitor is at normal mode with any timing.
2. Press △ or ▽ or ◁ or ▷ to select the OSD to "CONTRAST".
3. Adjust ⊞ or ⊟ to change the contrast level, other than DATA=255.
4. Press ⊞ and ⊟ together to reset contrast to factory preset value.
5. Observe the contrast changes and DATA=255 on the OSD.

*(c-2) Brightness Center-Click*

1. Ensure that the monitor is at normal mode with any timing.
2. Press △ or ▽ or ◁ or ▷ to select the OSD to "BRIGHTNESS".
3. Adjust ⊞ or ⊟ to change the brightness level, other than DATA=128.
4. Press ⊞ and ⊟ together to bring brightness to center value.
5. Observe the brightness changes and DATA=128 on the OSD.

*(c-3) OSD Off Function*

1. This can be performed when the monitor is either at normal or factory mode.
2. Press △ or ▽ or ◁ or ▷ to activate the OSD.
3. Press "OSD OFF" button, ensure the OSD is off.
4. Press ⊞ or ⊟ to ensure that adjustment of data is still valid.

*(c-4) Clamp Position Function*

1. This can be performed when the monitor is only at normal mode.
2. Input Sync On Green Signal. Observe that the picture is "Green".
3. Press △ or ▽ to select the OSD to "CLAMP POSITION".
4. Press ⊞ to select "BACK" and ensure that picture changes to normal "White".

*(c-5) DDC Check*

1. Connect Signal cable to the D-SUB 9-15Pin of the DDC Checker.
2. Power on the monitor and the checker.
3. Ensure that the customer's requirement data is pre-stored inside the EEprom of the checker.
4. Press "RESET" on the checker so that all lighted LEDs will be turned "OFF".
5. Press "WRITE" on the checker. Ensure that "WRITE" and "OK" buttons are lighted up indicating the write process is completed.
6. If fails, repeat from step 1 again.Abort the process if 3 attempts have been made.
7. Power off and on the monitor after "WRITE" process.
8. Press "CHECK" button on the checker. Ensure that "CHECK" and "OK" buttons are lighted up which indicates that DDC function is good.
9. If "CHECK" and "NG" buttons are lighted up,repeat from step 1 again.Abort the process if 3 attempts have been made.

*(c-6) Sync On Green Check (For CSG Models only!)*

1. Remove Hsync and Vsync.
2. Input Sync On Green signal, example 35.0k/67Hz.
3. Check that the monitor is in the normal condition.

NB : (*) Only applied to normal mode.

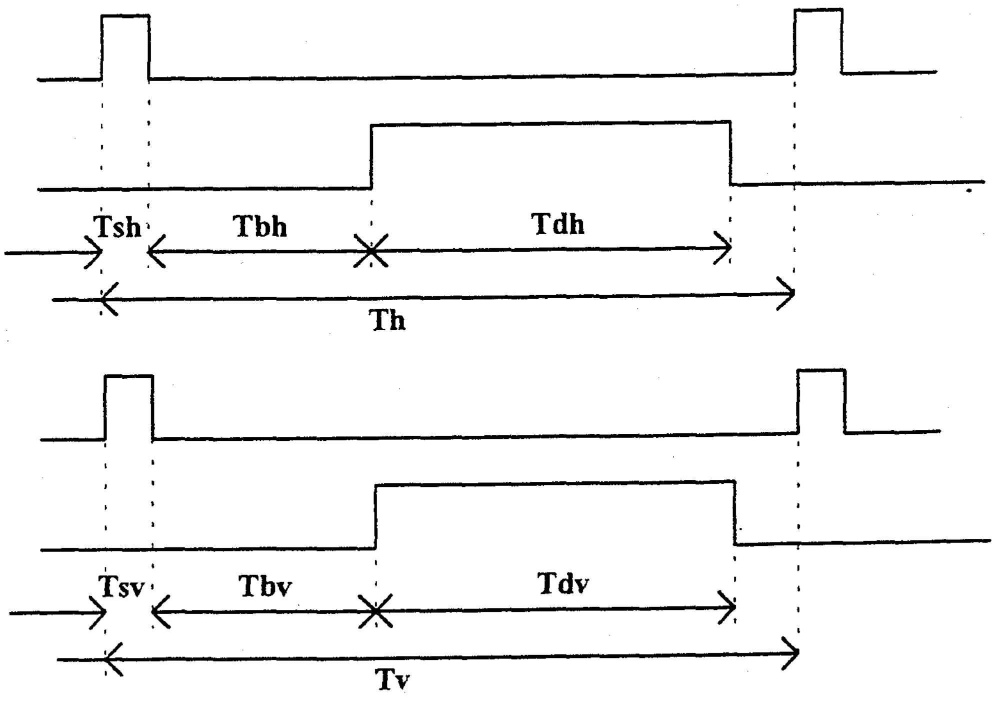
## 3.7 SHIPMENT SETTING CONDITION

Shipment setting for following items.

| | Action | Action | Action |
|---|---|---|---|
| OSD | SD5700C/02C | SD5707C | SD5703/04CSG |
| Brightness | Center | Center | Center |
| Contrast | Maximum | Maximum | Maximum |
| Color Mode | Standard 9300K | Standard 9300K | Standard 9300K |
| Power Save | On | On | On |
| Clamp Position | Front | Back | Back |
| OSD Display | Normal mode | Normal mode | Normal mode |

# Chapter Four : APPENDIX

## *APPENDIX 1* *Timing Chart and Signal Timing*



### SD5707C (JAPAN OWN Brand)

*Preset Timings*

| Mode | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Resolution | 640x480<br>VGA480L | 640x400<br>VGA400L | 800x600<br>IBM600L | 1024x768<br>IBM | 640x400<br>NEC24.8K | 1024x768<br>NEC56.8K | 640x480<br>APPLE35K | 832x624<br>APPLE49.7K |
| Video clock (MHz) | 25.175 | 25.175 | 50.000 | 78.084 | 21.053 | 75.405 | 30.240 | 57.210 |
| HORIZONTAL | | | | | | | | |
| Scan Freq. (kHz) | 31.468 | 31.468 | 48.091 | 58.099 | 24.826 | 56.754 | 35.001 | 49.714 |
| Period (μs) | 31.778 | 31.778 | 20.794 | 17.212 | 40.280 | 17.620 | 28.571 | 20.115 |
| Sync Width (μs) | 3.813 | 3.813 | 2.399 | 1.742 | 3.040 | 1.710 | 2.116 | 1.118 |
| Back porch (μs) | 1.907 | 1.907 | 1.279 | 2.049 | 3.800 | 2.040 | 3.175 | 3.911 |
| Front porch (μs) | 0.636 | 0.636 | 1.121 | 0.307 | 3.040 | 0.290 | 2.116 | 0.558 |
| Active display (μs) | 25.422 | 25.422 | 15.995 | 13.114 | 30.400 | 13.580 | 21.164 | 14.528 |
| Sync polarity | - | - | + | - | - | - | - | - |
| VERTICAL | | | | | | | | |
| Scan Freq. (Hz) | 59.941 | 70.087 | 72.010 | 72.088 | 56.424 | 70.413 | 66.667 | 74.532 |
| Period (ms) | 16.683 | 14.268 | 13.887 | 13.872 | 17.723 | 14.202 | 15.000 | 13.417 |
| Sync Width (ms) | 0.064 | 0.064 | 0.124 | 0.103 | 0.161 | 0.106 | 0.086 | 0.060 |
| Back porch (ms) | 1.048 | 1.112 | 0.479 | 0.498 | 1.168 | 0.511 | 1.114 | 0.784 |
| Front porch (ms) | 0.318 | 0.381 | 0.808 | 0.052 | 0.282 | 0.053 | 0.086 | 0.021 |
| Active display (ms) | 15.253 | 12.711 | 12.476 | 13.219 | 16.112 | 13.532 | 13.714 | 12.552 |
| Sync polarity | - | + | + | - | - | - | - | - |
| Size and position | Preset | Preset | Preset | Preset | Preset | Preset | Preset | Preset |

## SD5700C/02C/03CSG (OWN Brand)

*Preset Timings*

| Mode | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Resolution | 640x480<br>VGA480L | 640x400<br>VGA400L | 640x350<br>VGA350L | 640x480<br>VGA72Hz | 800x600<br>SVGA72Hz | 1024x768<br>IBM | 1024x768<br>VESA76Hz |
| Video clock (MHz) | 25.175 | 25.175 | 25.175 | 31.500 | 50.000 | 78.085 | 83.700 |
| HORIZONTAL | | | | | | | |
| Scan Freq. (kHz) | 31.468 | 31.468 | 31.468 | 37.860 | 48.077 | 58.099 | 61.350 |
| Period (µs) | 31.778 | 31.778 | 31.778 | 26.413 | 20.800 | 17.212 | 16.300 |
| Sync Width (µs) | 3.813 | 3.813 | 3.813 | 1.270 | 2.400 | 1.742 | 1.052 |
| Back porch (µs) | 1.907 | 1.907 | 1.907 | 4.063 | 1.280 | 2.049 | 2.246 |
| Front porch (µs) | 0.636 | 0.636 | 0.636 | 0.762 | 1.120 | 0.307 | 0.765 |
| Active display (µs) | 25.422 | 25.422 | 25.422 | 20.318 | 16.000 | 13.114 | 12.237 |
| Sync polarity | - | - | + | - | + | - | + |
| VERTICAL | | | | | | | |
| Scan Freq. (Hz) | 59.941 | 70.087 | 70.087 | 72.807 | 72.187 | 72.088 | 76.075 |
| Period (ms) | 16.683 | 14.268 | 14.268 | 13.735 | 13.853 | 13.872 | 13.145 |
| Sync Width (ms) | 0.064 | 0.064 | 0.064 | 0.079 | 0.125 | 0.103 | 0.065 |
| Back porch (ms) | 1.048 | 1.112 | 1.906 | 0.740 | 0.478 | 0.498 | 0.441 |
| Front porch (ms) | 0.318 | 0.381 | 1.176 | 0.238 | 0.770 | 0.052 | 0.121 |
| Active display (ms) | 15.253 | 12.711 | 11.122 | 12.678 | 12.480 | 13.219 | 12.518 |
| Sync polarity | - | + | - | - | + | - | + |
| Size and position | Preset | Preset | Preset | Preset | Preset | Preset | Preset |

## SD5704CSG (OWN Brand)

*Preset Timings*

| Mode | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Resolution | 640x480<br>VGA480L | 640x400<br>VGA400L | 640x350<br>VGA350L | 640x480<br>VGA75Hz | 800x600<br>VESA75Hz | 1024x768 | 1024x768<br>VESA |
| Video clock (MHz) | 25.175 | 25.175 | 25.175 | 31.501 | 49.499 | 78.751 | 75.000 |
| HORIZONTAL | | | | | | | |
| Scan Freq. (kHz) | 31.468 | 31.468 | 31.468 | 37.501 | 46.876 | 60.024 | 56.475 |
| Period (µs) | 31.778 | 31.778 | 31.778 | 26.666 | 21.333 | 16.660 | 17.707 |
| Sync Width (µs) | 3.813 | 3.813 | 3.813 | 2.032 | 1.616 | 1.219 | 1.813 |
| Back porch (µs) | 1.907 | 1.907 | 1.907 | 3.809 | 3.232 | 2.235 | 1.920 |
| Front porch (µs) | 0.636 | 0.636 | 0.636 | 0.508 | 0.323 | 0.203 | 0.320 |
| Active display (µs) | 25.422 | 25.422 | 25.422 | 20.317 | 16.162 | 13.003 | 13.654 |
| Sync polarity | - | - | + | - | + | + | - |
| VERTICAL | | | | | | | |
| Scan Freq. (Hz) | 59.941 | 70.087 | 70.087 | 75.002 | 75.002 | 75.030 | 70.072 |
| Period (ms) | 16.683 | 14.268 | 14.268 | 13.333 | 13.333 | 13.328 | 14.271 |
| Sync Width (ms) | 0.064 | 0.064 | 0.064 | 0.080 | 0.064 | 0.050 | 0.106 |
| Back porch (ms) | 1.048 | 1.112 | 1.906 | 0.426 | 0.448 | 0.466 | 0.513 |
| Front porch (ms) | 0.318 | 0.381 | 1.176 | 0.027 | 0.021 | 0.017 | 0.053 |
| Active display (ms) | 15.253 | 12.711 | 11.122 | 12.800 | 12.800 | 12.795 | 13.598 |
| Sync polarity | - | + | - | - | + | + | - |
| Size and position | Preset | Preset | Preset | Preset | Preset | Preset | Preset |

## Adjustment and Checking Timings

| Name | Low | Mid | High / HV adj | Out of Range |
|---|---|---|---|---|
| Video clock (MHz) | 25.175 | 50.000 | 74.960 | 125.996 |
| HORIZONTAL | | | | |
| Scan Freq. (kHz) | 31.468 | 47.500 | 63.500 | 74.645 |
| Period (µs) | 31.778 | 21.050 | 15.740 | 13.397 |
| Sync Width (µs) | 3.813 | 2.400 | 1.020 | 0.889 |
| Back porch (µs) | 1.907 | 1.280 | 2.260 | 1.714 |
| Front porch (µs) | 0.636 | 1.120 | 0.720 | 0.635 |
| Active display (µs) | 25.422 | 16.250 | 11.740 | 10.159 |
| Sync polarity | - | + | + | + |
| VERTICAL | | | | |
| Scan Freq. (Hz) | 59.941 | 71.980 | 59.940 | 70.023 |
| Period (ms) | 16.683 | 13.893 | 16.684 | 14.281 |
| Sync Width (ms) | 0.064 | 0.124 | 0.079 | 0.067 |
| Back porch (ms) | 1.048 | 0.484 | 0.582 | 0.483 |
| Front porch (ms) | 0.318 | 0.802 | 0.016 | 0.013 |
| Active display (ms) | 15.253 | 12.483 | 16.007 | 13.718 |
| Sync polarity | - | + | + | + |

*Note :* *Timing 1,2,3 are used for adjustment stages.*
*Timing 4 is used to check "out of range" OSD.*

## *APPENDIX 2 PIN ASSIGNMENT ( Mini D-SUB 15p Male )*

### *ALL* model for H/V Separate & H/V composite signal

| PIN | SIGNAL |
|---|---|
| 1 | RED Video (Analog 0.7V STD) |
| 2 | GREEN Video (Analog 0.7V STD) |
| 3 | BLUE Video (Analog 0.7V STD) |
| 4 | GND |
| 5 | GND |
| 6 | RED GND |
| 7 | GREEN GND |
| 8 | BLUE GND |
| 9 | No Connection |
| 10 | GND |
| 11 | GND |
| 12 | SDA |
| 13 | H(H/V Composite) Sync (TTL) |
| 14 | V-Sync (TTL) |
| 15 | SCL |

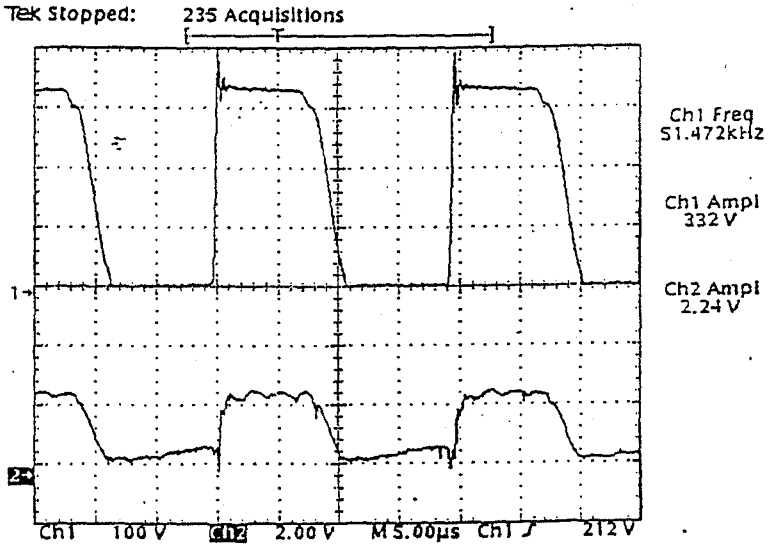
### SD570*CSG Model for sync on GREEN

| PIN | SIGNAL |
|---|---|
| 1 | RED Video (Analog 0.7V STD) |
| 2 | GREEN Video (Analog 0.7V for video, 0.3V for sync.) |
| 3 | BLUE Video (Analog 0.7V STD) |
| 4 | No Connection |
| 5 | No Connection |
| 6 | RED GND |
| 7 | GREEN GND |
| 8 | BLUE GND |
| 9 | No Connection |
| 10 | No Connection |
| 11 | No Connection |
| 12 | SDA |
| 13 | No Connection |
| 14 | No Connection |
| 15 | SCL |

## APPENDIX 3 : CIRCUIT OUTPUT WAVEFORM

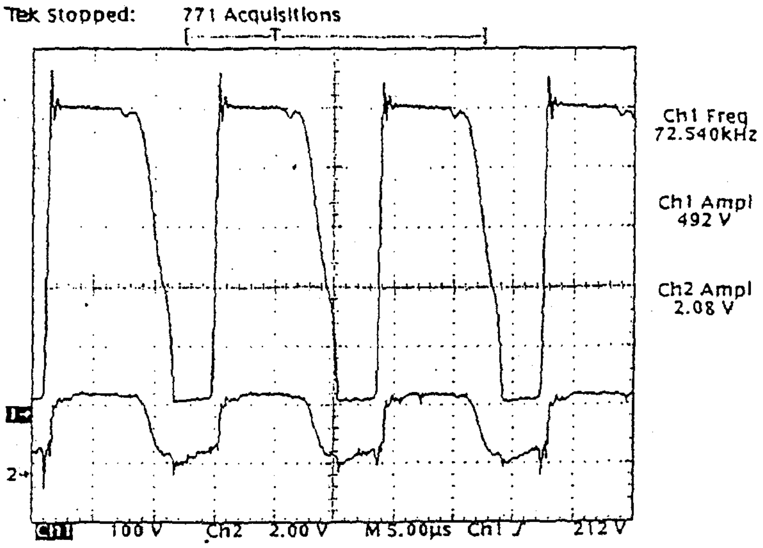
Unless otherwise specified herein, all waveforms are taken with following conditions :-

1) Power supply : AC120V, 50Hz
2) Input signal : fH = 57.9KHz
fV = 72Hz
3) Picture pattern : 8 colours bar signals
4) Brightness : Center
5) Contrast : Max.
6) Piccture size : at preset condition
7) Measuring tool : Tectronix TDS460



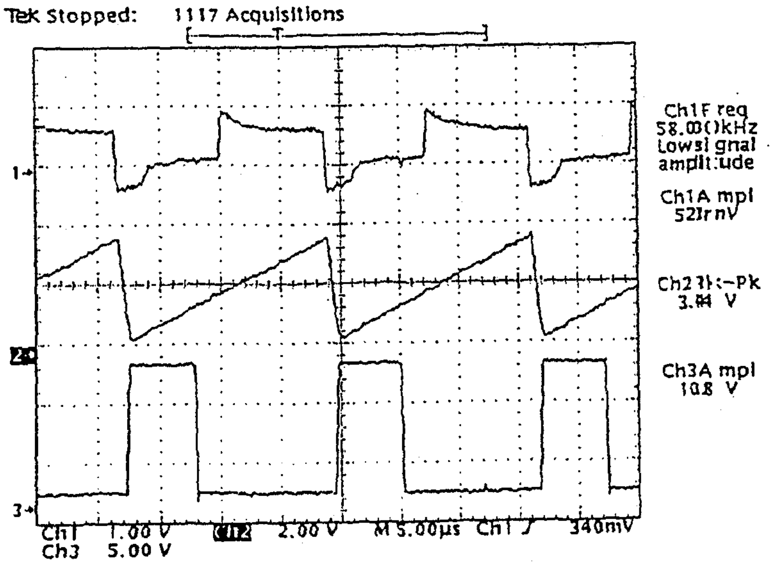
Waveform 1 : Primary Circuit AC 120V 50Hz input

Channel 1 : Switching frequency at pin 1 of IC902
Channel 2 : Inhibit signal at Pin 8 of IC902.



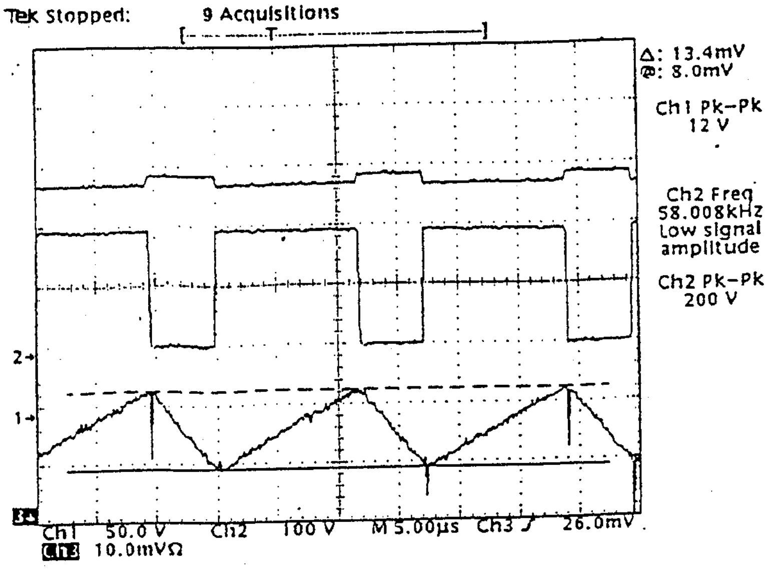
Waveform 2 : Primary Circuit, AC 240V 60Hz input

Channel 1 : Switching frequency at pin 1 of IC902
Channel 2 : Inhibit signal at Pin 8 of IC902.



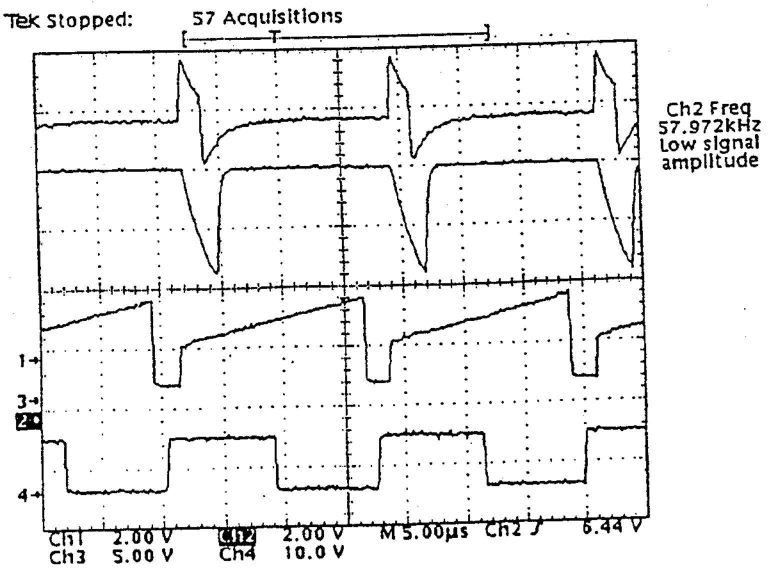
Waveform 3 : B4 vvoltage control IC ( IC502 )

Channel 1 : Input triggering pulse at pin 13 of IC502.
Channel 2 : Free-running frequenccy at pin 11 of IC502.
Channel 3 : Output pulse at pin 9 of IC502.



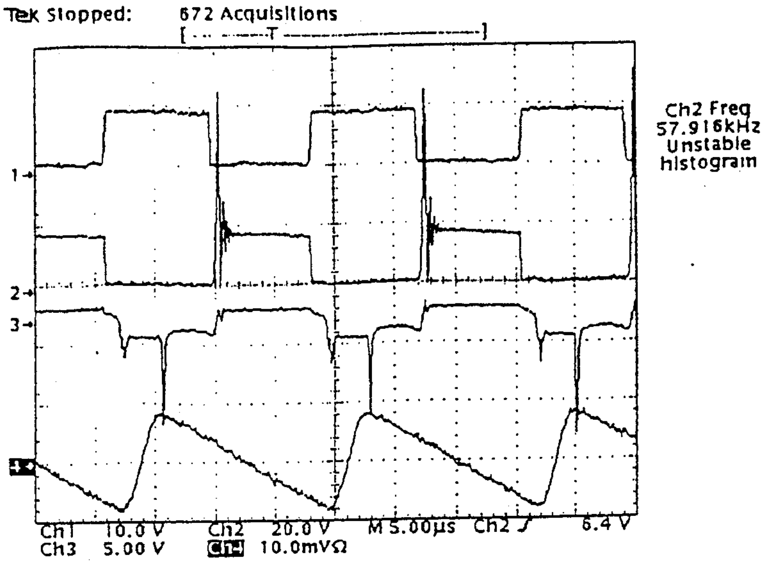
Waveform 4 : B4 Switching Transistor Q957

Channel 1 : Q957 Gate.
Channel 2 : Q957 Drain.
Channel 3 : Current waveform of L956.



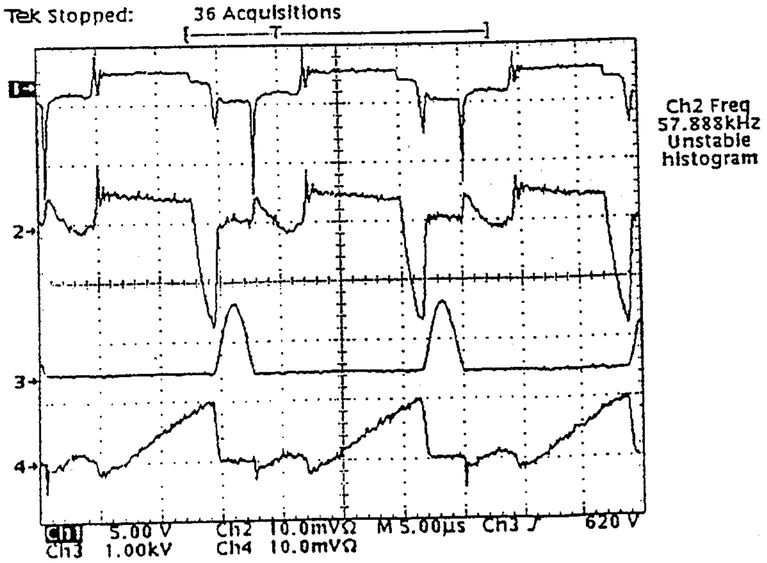
Waveform 5 : Horizontal Oscillator at IC501.

Channel 1 : H-Sync input at pin 1.
Channel 2 : H-Phase control at pin 2.
Channel 3 : Sawtooth voltage at pin 9.
Channel 4 : Drive voltage at pin 13.



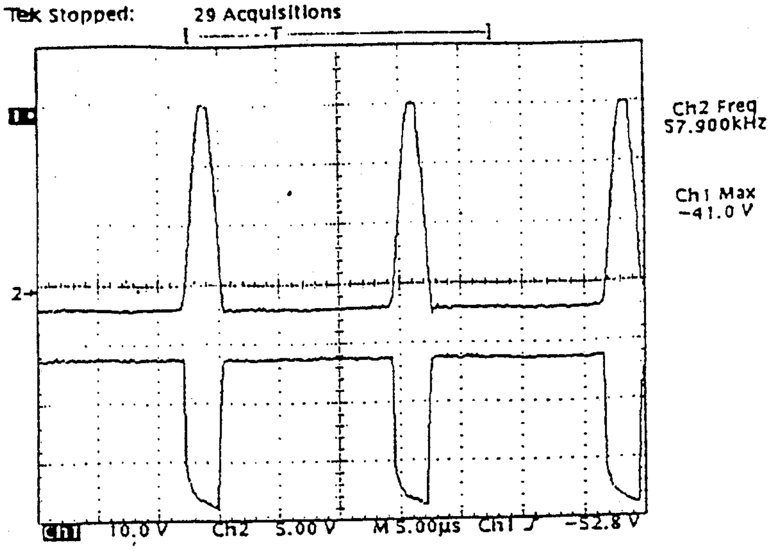
Waveform 6 : Horizontal Driver.

Channel 1 : Drive voltage at pin 13 of IC501.
Channel 2 : Drive voltage at drain of Q505.
Channel 3 : Base voltage of Q506.
Channel 4 : DY scanning current.



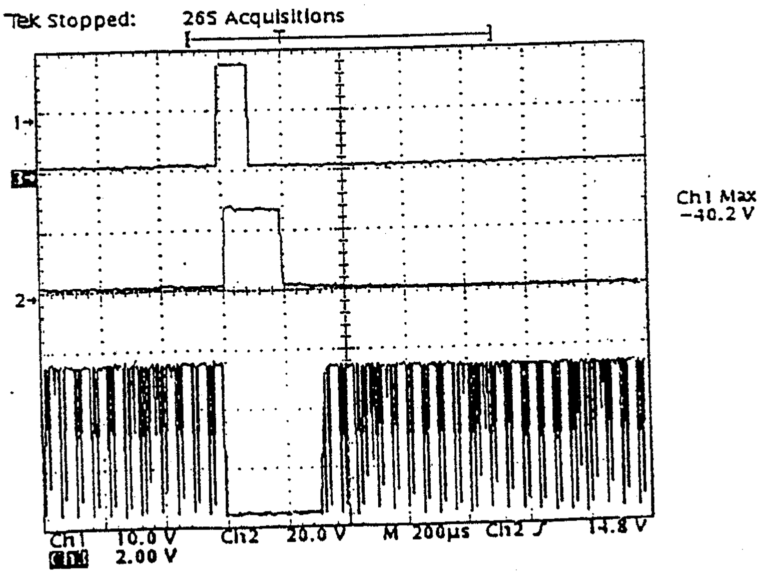
Waveform 7 : Horizontal Deflection.

Channel 1 : Base voltage of Q506.
Channel 2 : Base current of Q506.
Channel 3 : Collector voltage of Q506.
Channel 4 : Collector current of Q506.



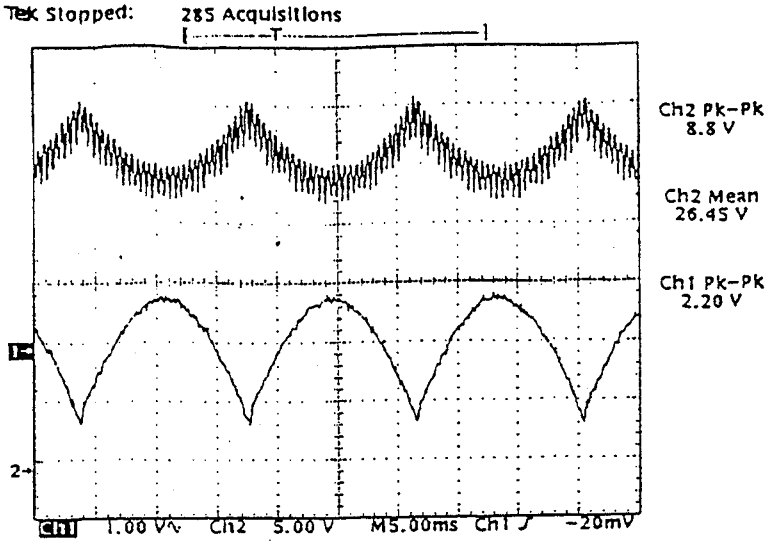
Waveform 8 : Horizontal Blanking.

Channel 1 : G1 voltage at pin 1 of J501.
Channel 2 : Horizontal Flyback for blanking at pin 4 of T502.



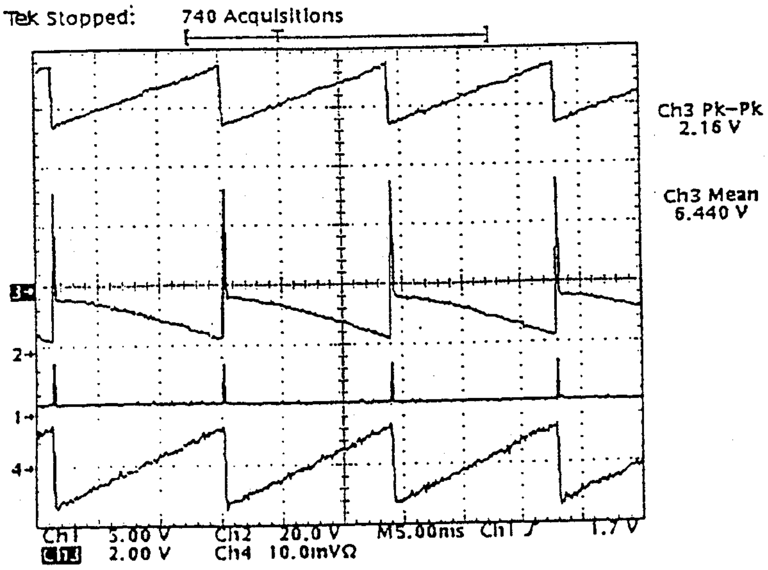
Waveform 9 : Vertical Blanking.

Channel 1 : G1 voltage at pin 1 of J501.
Channel 2 : Vertical blanking at pin 9 of IC401.



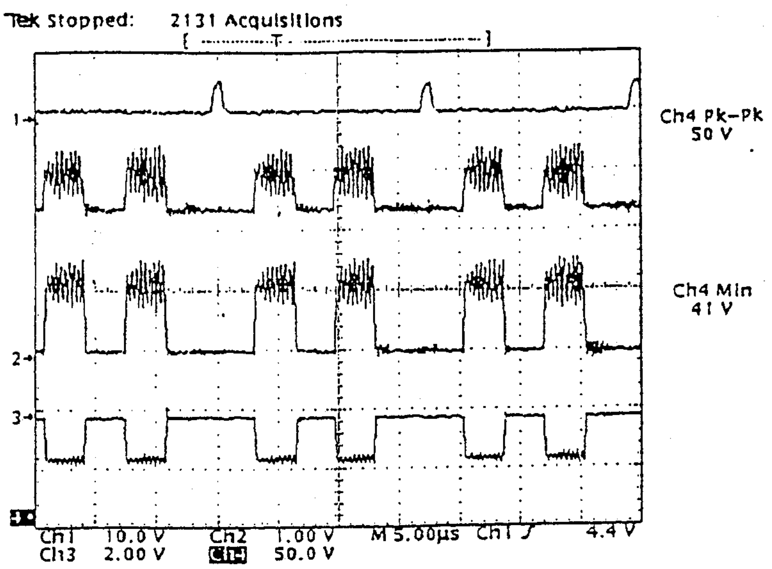
Waveform 10 : PCC & H-Size Control.

Channel 1 : Output at pin 1 of IC105.
Channel 2 : Pin 5 of L505.



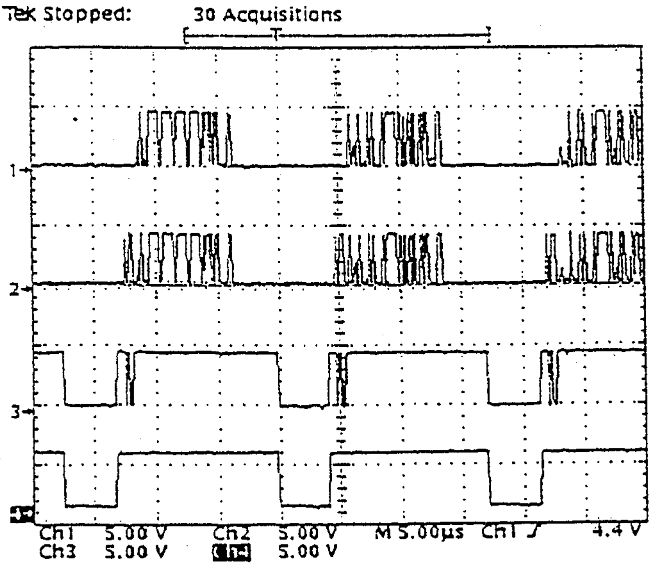
Waveform 11 : Vertical Circuit.

Channel 1 : Vertical sync input from µP ( Pin VD ).
Channel 2 : Vertical osccillator voltage at pin 6 of IC401.
Channel 3 : Output voltage at pin 12 of IC401.
Channel 4 : Vertical scanning current.



Waveform 12 : Video Signal.

Channel 1 : Clamping pulse at pin 15 of IC200.
Channel 2 : Green input at pin 11 of IC200.
Channel 3 : Green output at pin 21 of IC200.
Channel 4 : Green output at CRT Cathode.



Waveform 13 : OSD Signal.

Channel 1 : Green-OSD at pin 1 of J204.
Channel 2 : Red-OSD at pin 3 of J204.
Channel 3 : Blue-OSD at pin 2 of J204.
Channel 4 : OSD blanking at pin 4 of J204.

## *APPENDIX 4 : BLOCK DIAGRAMS*

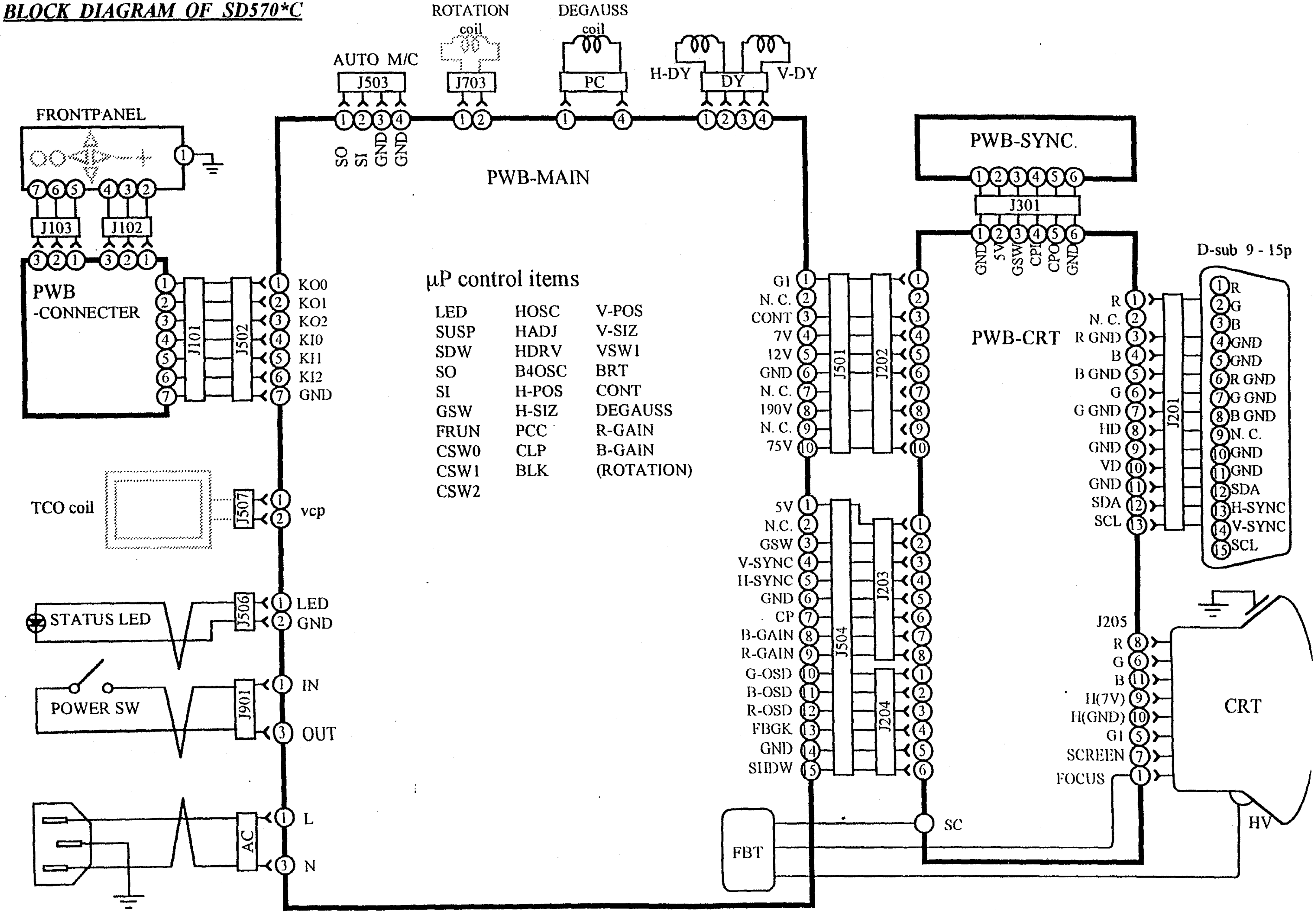
4.1.1 BLOCK DIAGRAM OF SD570*C.

4.1.2 BLOCK DIAGRAM OF SD570*CSG.

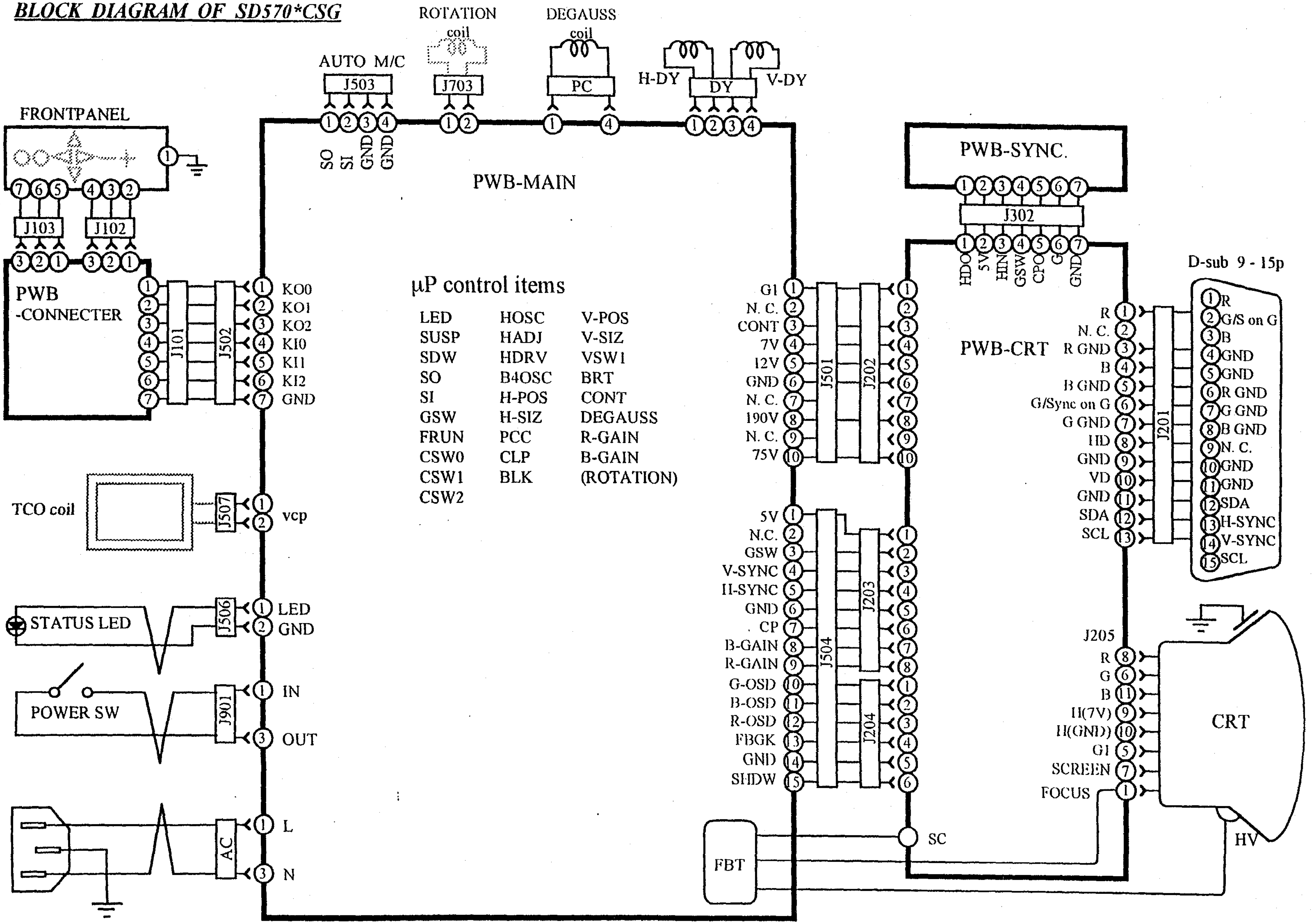
4.1.3 BLOCK DIAGRAM OF SD570*C SERIES.

4.1.4 BLOCK DIAGRAM OF SD570*CSG SERIES.

# BLOCK DIAGRAM OF SD570*C

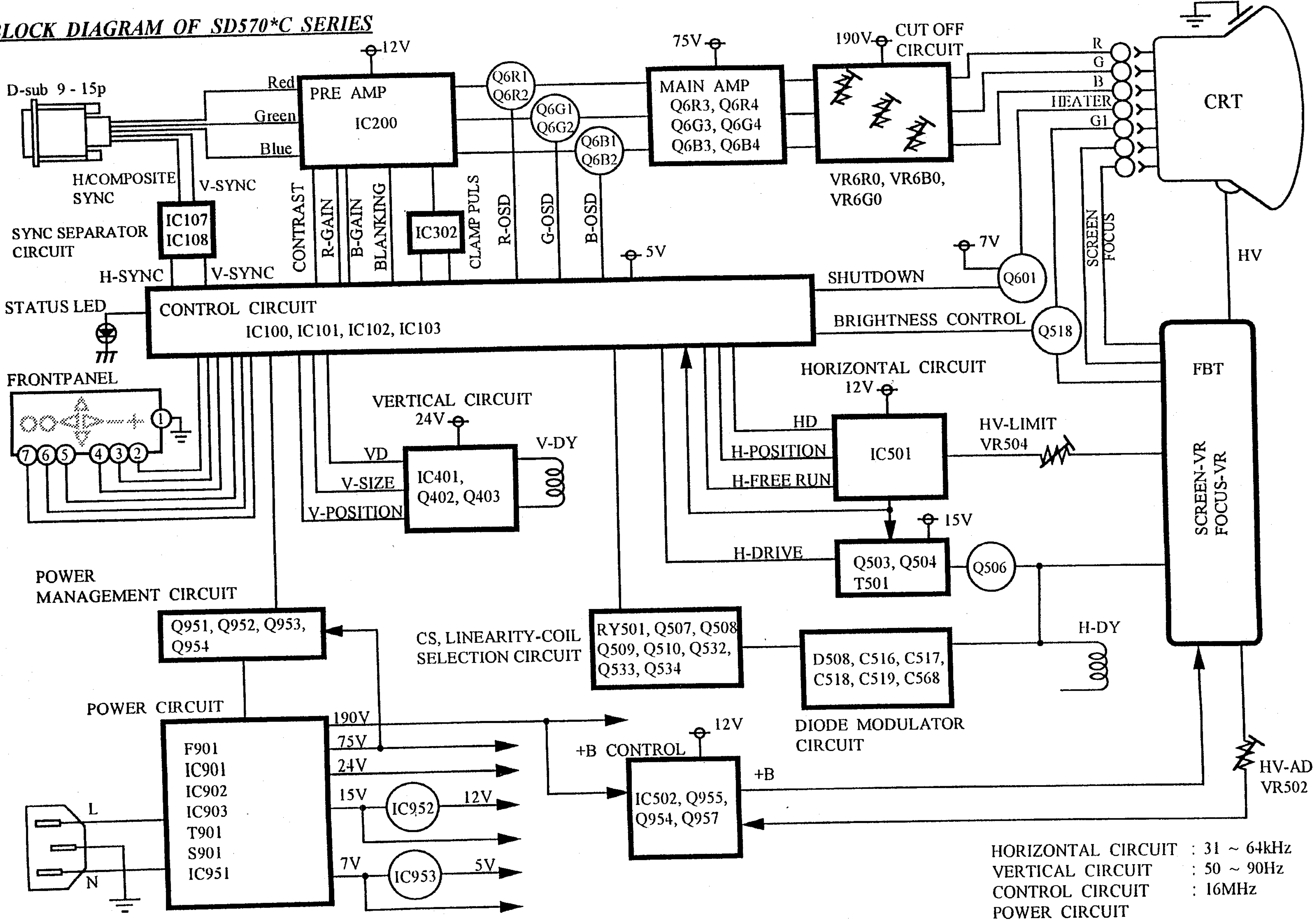

ROTATION coil
DEGAUSS coil
AUTO M/C
J503
1 2 3 4
SO SI GND GND
J703
1 2
PC
1 4
H-DY
DY
V-DY
1 2 3 4
FRONTPANEL
1
7 6 5 4 3 2
J103
J102
3 2 1 3 2 1
PWB -CONNECTER
J101
J502
1 KO0
2 KO1
3 KO2
4 KI0
5 KI1
6 KI2
7 GND
PWB-MAIN
µP control items
LED
SUSP
SDW
SO
SI
GSW
FRUN
CSW0
CSW1
CSW2
HOSC
HADJ
HDRV
B4OSC
H-POS
H-SIZ
PCC
CLP
BLK
V-POS
V-SIZ
VSW1
BRT
CONT
DEGAUSS
R-GAIN
B-GAIN
(ROTATION)
TCO coil
J507
1 2 vcp
STATUS LED
J506
1 LED
2 GND
POWER SW
J901
1 IN
3 OUT
AC
1 L
3 N
PWB-SYNC.
J301
1 2 3 4 5 6
GND 5V GSW CPI CPO GND
G1 1
N. C. 2
CONT 3
7V 4
12V 5
GND 6
N. C. 7
190V 8
N. C. 9
75V 10
J501
J202
5V 1
N.C. 2
GSW 3
V-SYNC 4
H-SYNC 5
GND 6
CP 7
B-GAIN 8
R-GAIN 9
G-OSD 10
B-OSD 11
R-OSD 12
FBGK 13
GND 14
SHDW 15
J504
J203
J204
PWB-CRT
R 1
N. C. 2
R GND 3
B 4
B GND 5
G 6
G GND 7
HD 8
GND 9
VD 10
GND 11
SDA 12
SCL 13
J201
D-sub 9 - 15p
1 R
2 G
3 B
4 GND
5 GND
6 R GND
7 G GND
8 B GND
9 N. C.
10 GND
11 GND
12 SDA
13 H-SYNC
14 V-SYNC
15 SCL
J205
R 8
G 6
B 11
H(7V) 9
H(GND) 10
G1 5
SCREEN 7
FOCUS 1
CRT
HV
SC
FBT

# *BLOCK DIAGRAM OF SD570*CSG*

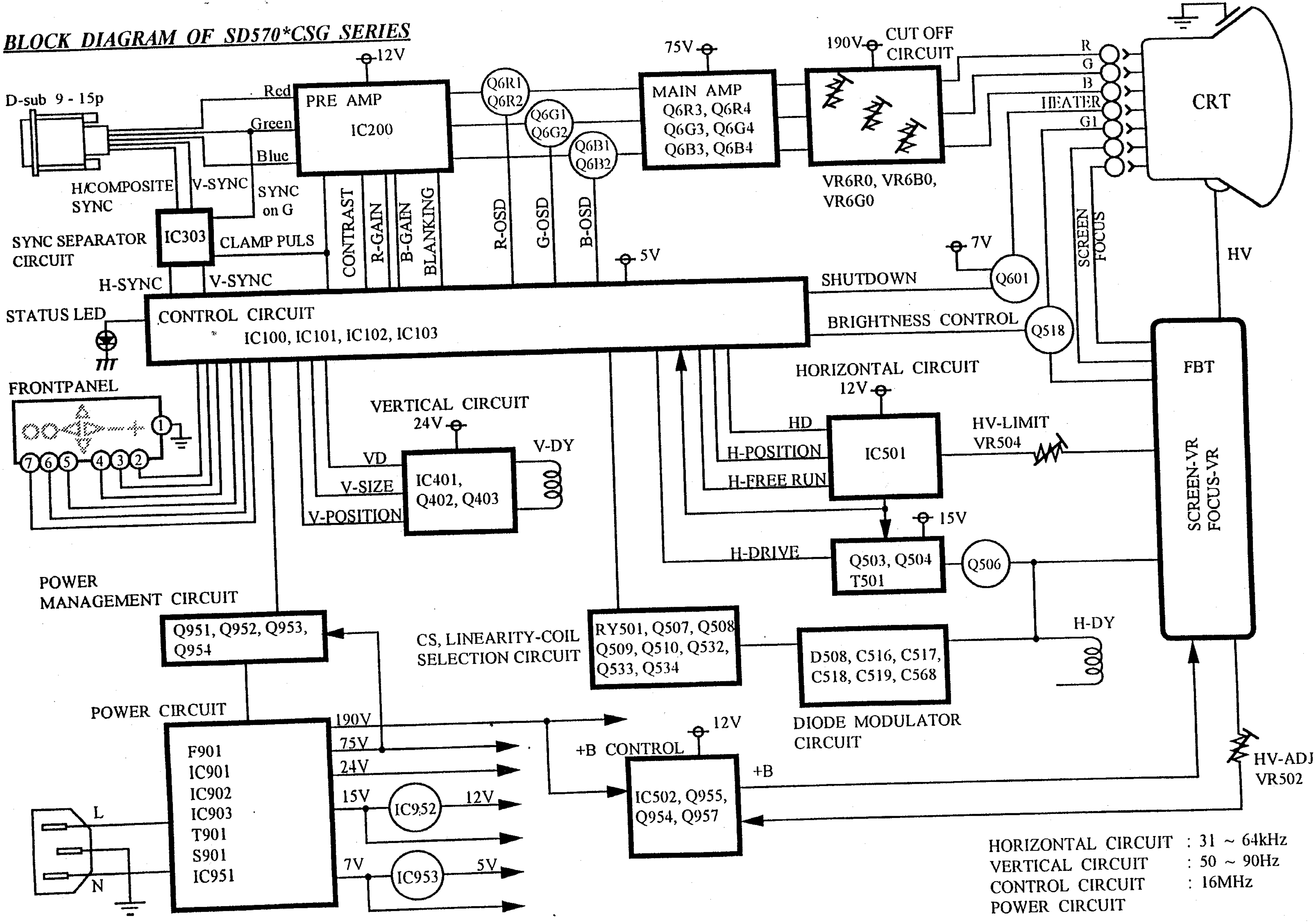


ROTATION coil
DEGAUSS coil
AUTO M/C
J503
J703
PC
H-DY
DY
V-DY
SO SI GND GND
FRONTPANEL
J103
J102
PWB-MAIN
PWB-SYNC.
J302
HDO 5V HIN GSW CPO G GND
D-sub 9 - 15p
PWB -CONNECTER
J101
J502
KO0 KO1 KO2 KI0 KI1 KI2 GND
µP control items
LED SUSP SDW SO SI GSW FRUN CSW0 CSW1 CSW2
HOSC HADJ HDRV B4OSC H-POS H-SIZ PCC CLP BLK
V-POS V-SIZ VSW1 BRT CONT DEGAUSS R-GAIN B-GAIN (ROTATION)
G1 N. C. CONT 7V 12V GND N. C. 190V N. C. 75V
J501
J202
PWB-CRT
R N. C. R GND B B GND G/Sync on G G GND HD GND VD GND SDA SCL
J201
R G/S on G B GND GND R GND G GND B GND N. C. GND GND SDA H-SYNC V-SYNC SCL
TCO coil
J507
vcp
5V N.C. GSW V-SYNC H-SYNC GND CP B-GAIN R-GAIN G-OSD B-OSD R-OSD FBGK GND SHDW
J504
J203
J204
STATUS LED
J506
LED GND
POWER SW
J901
IN OUT
AC
L N
J205
R G B H(7V) H(GND) G1 SCREEN FOCUS
CRT
FBT
SC
HV

## *BLOCK DIAGRAM OF SD570*C SERIES*


D-sub 9 - 15p
Red
Green
Blue
H/COMPOSITE SYNC
V-SYNC
SYNC SEPARATOR CIRCUIT
IC107 IC108
H-SYNC
V-SYNC
12V
PRE AMP IC200
CONTRAST
R-GAIN
B-GAIN
BLANKING
IC302
CLAMP PULS
Q6R1 Q6R2
Q6G1 Q6G2
Q6B1 Q6B2
R-OSD
G-OSD
B-OSD
5V
75V
MAIN AMP Q6R3, Q6R4 Q6G3, Q6G4 Q6B3, Q6B4
190V
CUT OFF CIRCUIT
VR6R0, VR6B0, VR6G0
R
G
B
HEATER
G1
SCREEN
FOCUS
CRT
HV
7V
Q601
SHUTDOWN
BRIGHTNESS CONTROL
Q518
STATUS LED
CONTROL CIRCUIT IC100, IC101, IC102, IC103
FRONTPANEL
1
2
3
4
5
6
7
VERTICAL CIRCUIT
24V
VD
V-SIZE
V-POSITION
IC401, Q402, Q403
V-DY
HORIZONTAL CIRCUIT
12V
HD
H-POSITION
H-FREE RUN
IC501
HV-LIMIT VR504
15V
H-DRIVE
Q503, Q504 T501
Q506
FBT
SCREEN-VR FOCUS-VR
POWER MANAGEMENT CIRCUIT
Q951, Q952, Q953, Q954
CS, LINEARITY-COIL SELECTION CIRCUIT
RY501, Q507, Q508 Q509, Q510, Q532, Q533, Q534
D508, C516, C517, C518, C519, C568
DIODE MODULATOR CIRCUIT
H-DY
POWER CIRCUIT
F901 IC901 IC902 IC903 T901 S901 IC951
L
N
190V
75V
24V
15V
IC952
12V
7V
IC953
5V
+B CONTROL
12V
IC502, Q955, Q954, Q957
+B
HV-ADJ VR502
HORIZONTAL CIRCUIT : 31 ~ 64kHz
VERTICAL CIRCUIT : 50 ~ 90Hz
CONTROL CIRCUIT : 16MHz
POWER CIRCUIT

## BLOCK DIAGRAM OF SD570*CSG SERIES



D-sub 9 - 15p
Red
Green
Blue
H/COMPOSITE SYNC
V-SYNC
SYNC on G
SYNC SEPARATOR CIRCUIT
IC303
CLAMP PULS
H-SYNC
V-SYNC
12V
PRE AMP
IC200
CONTRAST
R-GAIN
B-GAIN
BLANKING
Q6R1 Q6R2
Q6G1 Q6G2
Q6B1 Q6B2
R-OSD
G-OSD
B-OSD
5V
75V
MAIN AMP
Q6R3, Q6R4
Q6G3, Q6G4
Q6B3, Q6B4
190V
CUT OFF CIRCUIT
VR6R0, VR6B0, VR6G0
R
G
B
HEATER
G1
SCREEN
FOCUS
CRT
HV
7V
Q601
SHUTDOWN
BRIGHTNESS CONTROL
Q518
STATUS LED
CONTROL CIRCUIT
IC100, IC101, IC102, IC103
FRONTPANEL
1
2
3
4
5
6
7
VERTICAL CIRCUIT
24V
VD
V-SIZE
V-POSITION
IC401, Q402, Q403
V-DY
HORIZONTAL CIRCUIT
12V
HD
H-POSITION
H-FREE RUN
IC501
HV-LIMIT VR504
15V
H-DRIVE
Q503, Q504
T501
Q506
FBT
SCREEN-VR
FOCUS-VR
H-DY
POWER MANAGEMENT CIRCUIT
Q951, Q952, Q953, Q954
CS, LINEARITY-COIL SELECTION CIRCUIT
RY501, Q507, Q508
Q509, Q510, Q532,
Q533, Q534
D508, C516, C517,
C518, C519, C568
DIODE MODULATOR CIRCUIT
POWER CIRCUIT
F901
IC901
IC902
IC903
T901
S901
IC951
L
N
190V
75V
24V
15V
IC952
12V
7V
IC953
5V
+B CONTROL
12V
IC502, Q955,
Q954, Q957
+B
HV-ADJ VR502

HORIZONTAL CIRCUIT : 31 ~ 64kHz
VERTICAL CIRCUIT : 50 ~ 90Hz
CONTROL CIRCUIT : 16MHz
POWER CIRCUIT

# APPENDIX5 : SCHEMATIC DIAGRAMS

# RECOMMENDED SERVICE PARTS AND PRICE LIST

REVISION : 20/OCT/1995
ISSUED: 25/SEPT/1995
PAGE : 2 / 6

MODEL NO.: SD5700C-US / SD5707C / SD5707C-PA / SD5705C-SD

| SYMBOL NO. | DESCRIPTION | SPECIFICATION | PART NO. | MINIMUM P/O QTY | PRICE FOB @US$ |
|---|---|---|---|---|---|
| CRT | ASSY-ITC | | TB25100270 | 10 | 200.00 |
| C 135R | C-ELECTROLYTIC | 25V 220M-M | CP181P04007 | 30 | 0.30 |
| C 404M | C-ELECTROLYTIC | 50V 220M-M | CP181P04209 | 30 | 0.50 |
| C 411 | C-ELECTROLYTIC | 25V 1800M-M | CP181P06201 | 30 | 1.50 |
| C 526M | C-ELECTROLYTIC | 200V 22U-M | CP181P14206 | 30 | 0.50 |
| C 545R | C-ELECTROLYTIC | 100V 1UF-M | CP181P03402 | 30 | 0.30 |
| C 549M | C-ELECTROLYTIC | 16V 1000M-M | CP181P18209 | 30 | 0.30 |
| C 564M | C-ELECTROLYTIC | 250V 0.47M | CP181P04707 | 30 | 0.30 |
| C 607R | C-ELECTROLYTIC | 04W 100V 22M-M | CP181P04402 | 30 | 0.30 |
| C 6GCR | C-ELECTROLYTIC | 100V 1UF | CP181P04307 | 30 | 0.30 |
| C 906 | C-ELECTROLYTIC | H400V 390UF-M | CP181P22609 | 30 | 9.00 |
| C 914R | C-ELECTROLYTIC | 100V 10M | CP181P03406 | 30 | 0.30 |
| C 951M | C-ELECTROLYTIC | 250V 220M-M | CP181P04807 | 30 | 3.00 |
| C 952M | C-ELECTROLYTIC | 250V 33M-M | CP181P04804 | 30 | 0.80 |
| C 953M | C-ELECTROLYTIC | 100V 100UF-M 105 | CP181P04405 | 30 | 0.60 |
| C 954M | C-ELECTROLYTIC | 04W 100V 220M-M | CP181P03501 | 30 | 0.60 |
| C 956M | C-ELECTROLYTIC | 04W 50V 470M-M | CP181P04301 | 30 | 0.60 |
| C 958M | C-ELECTROLYTIC | 25V 1000M-M | CP181P04100 | 30 | 0.80 |
| C 960M | C-ELECTROLYTIC | 04W 25V 3300M-M | CP181P04102 | 30 | 1.00 |
| C 961M | C-ELECTROLYTIC | 25V 470M-M | CP181P03009 | 30 | 0.30 |
| D 100 | DIODE-ZENER | HZS 7C1L | CP264P18106 | 30 | 0.30 |
| D 111A | DIODE | IS2076A / IS2471 | 264P04508 | 30 | 0.30 |
| D 132A | DIODE | 1SS83TA | QX264P36701 | 30 | 0.30 |
| D 402A | DIODE | RGP 10D | CP264P15401 | 30 | 0.30 |
| D 502M | DIODE | RL-2Z | CP264P52201 | 30 | 0.40 |
| D 503M | DIODE | CTUG 2DR | RX274P55301 | 30 | 1.30 |
| D 506A | DIODE | RGP 10J | CP264P11301 | 30 | 0.30 |
| D 508M | DIODE-DAMPER | FMP-3FU | CP264P23001 | 30 | 2.50 |
| D 512A | DIODE | EU1 | CP264P00901 | 30 | 0.30 |

# RECOMMENDED SERVICE PARTS AND PRICE LIST

**REVISION : 20/OCT/1995**
**ISSUED: 25/SEPT/1995**
**PAGE : 2 / 6**

**MODEL NO.: SD5700C-US / SD5707C / SD5707C-PA / SD5705C-SD**

| SYMBOL NO. | DESCRIPTION | SPECIFICATION | PART NO. | MINIMUM P/O QTY | PRICE FOB @US$ |
|---|---|---|---|---|---|
| D 514A | DIODE-ZENER | HZ36-2 | CP264P08407 | 30 | 0.30 |
| D 6R3A | DIODE-ZENER | HZS24-2LTA | CP264P18603 | 30 | 0.30 |
| D 901M | DIODE | RM-1A | 264P10104 | 30 | 0.30 |
| D 904A | DIODE | EU2A / RGP 10G | CP264D00601 | 30 | 0.30 |
| D 951M | DIODE | RGP15J-L6431 | CP264P15103 | 30 | 0.50 |
| D 955M | DIODE | RU-4Z-M1 | CP264P17002 | 30 | 1.00 |
| D 963M | DIODE | S2L60 | CP264P23101 | 30 | 1.00 |
| D 970M | DIODE | ST05-16 | CP264P23401 | 30 | 1.00 |
| F 901 | FUSE |  | CP283P01707 | 30 | 0.80 |
| F 951M | FUSE | SSFR-FUSE 3A 1430/1410 | CP283P00105 | 30 | 0.80 |
| F 953A | FUSE | 25101.5 1.5A | CP283P01603 | 30 | 0.80 |
| F 956 | FUSE | 251001 1A | CP283P01602 | 30 | 0.80 |
| F 957 | FUSE | 251001 1A | CP283P01602 | 30 | 0.80 |
| IC 100 | IC | IC D1603-OSD | P26601602 | 30 | 6.50 |
| IC 101 | IC | IC D1604A | P26601702 | 30 | 6.50 |
| IC 102 | IC | KIA555P | P26601801 | 30 | 0.50 |
| IC 103M | IC | EEPROM 24LC04BP | CP267P08502 | 30 | 2.50 |
| IC 105M | IC | M5223P | CP263P02201 | 30 | 0.50 |
| IC 106M | IC | LSC4321P | CP263P10002 | 30 | 9.00 |
| IC 200 | IC | M52733SP | P26601901 | 30 | 3.50 |
| IC 201M | IC | EEPROM 24LC21 | CP267P08601 | 30 | 2.50 |
| IC 401M | IC | LA7837 | CP263P08001 | 30 | 1.50 |
| IC 501M | IC | LA7852 | CP266P01401 | 30 | 2.50 |
| IC 502M | IC | FA5301P | CP263P08802 | 30 | 3.00 |
| IC 901M | IC | MZ2 400 | CP267P06101 | 30 | 3.50 |
| IC 902M | IC | STR-S6707 | CP267P06201 | 30 | 5.00 |
| IC 951M | IC | SE075 | P26601401 | 30 | 1.00 |
| IC 952M | IC | UPC7812HF / L7812ML / M5F7812L | CP266P05003 | 30 | 0.60 |
| IC 953M | IC | M5278D05 | CP263P09101 | 30 | 1.00 |

# RECOMMENDED SERVICE PARTS AND PRICE LIST

**MODEL NO.: SD5700C-US / SD5707C / SD5707C-PA / SD5705C-SD**

| SYMBOL NO. | DESCRIPTION | SPECIFICATION | PART NO. | MINIMUM P/O QTY | PRICE FOB @US$ |
|---|---|---|---|---|---|
| L 503M | COIL-HORIZ-LIN | | CP333P02603 | 30 | 3.50 |
| L 505M | TRANS-CHOKE | | C32100501 | 30 | 3.00 |
| L 956 | COIL-CHOKE | | CP321P05202 | 30 | 1.50 |
| Q 100 | TRANSISTOR | 2SA 1207S-AA | CP260P07002 | 30 | 0.30 |
| Q 108 | TRANSISTOR | 2SC 3311A | CP260P21301 | 30 | 0.30 |
| Q 401M | TRANSISTOR | 2SD 2012 / 2SD 1406-Y,GR | CP260P08601 | 30 | 0.30 |
| Q 402M | TRANSISTOR | 2SB 1375 / 2SB 1015-Y | CP260P08701 | 30 | 0.40 |
| Q 410R | TRANSISTOR | 2SC 1815-BL,GR,Y | CP260P05702 | 30 | 0.30 |
| Q 503R | TRANSISTOR | 2SC 2909S-AA | CP260P07001 | 30 | 0.30 |
| Q 505R | MOS-FET | 2SK 940 (TPE6) | CP260P21601 | 30 | 0.30 |
| Q 506M | TRANSISTOR | 2SC 4924-CA | D26001201 | 30 | 4.50 |
| Q 508M | MOS-FET | 2SK 1917 | CP260P18701 | 30 | 2.00 |
| Q 511R | TRANSISTOR | 2SA 1309A | CP260P21401 | 30 | 0.30 |
| Q 6R2R | TRANSISTOR | 2SC 4767 | CP260P15301 | 30 | 0.40 |
| Q 6R4M | TRANSISTOR | 2SC 3953E / F,CD | CP260P07401 | 30 | 0.50 |
| Q 601M | TRANSISTOR | 2SC 4833 | CP260P26201 | 30 | 2.20 |
| Q 901M | TRANSISTOR | 2SD 1640 | CP260P23301 | 30 | 0.80 |
| Q 951M | TRANSISTOR | 2SB 1095 | CP260P24301 | 30 | 1.20 |
| Q 952M | TRANSISTOR | KSC 2383-Y | CP260P16001 | 30 | 0.30 |
| Q 953M | TRANSISTOR | 2SC 2240 | CP260P13801 | 30 | 0.30 |
| Q 957M | MOS-FET | 2SJ 306 | CP260P20201 | 30 | 2.50 |
| R 411M | R-METAL | 3W 33-J | 103C19007 | 30 | 0.25 |
| R 420M | R-METAL | 2W 1.5-J | 103C18802 | 30 | 0.25 |
| R 524M | R-METAL | 1W 4.7-J | 103C17808 | 30 | 0.25 |
| R 529M | R-METAL | 1W 390-J | 103C17200 | 30 | 0.25 |
| R 537M | R-METAL | 1W 0.56-J | 103C17707 | 30 | 0.25 |
| R 538M | R-METAL | 2W 1.8-J | 103C18803 | 30 | 0.25 |
| R 550M | R-METAL | 1W 15K-J | 103C17309 | 30 | 0.25 |
| R 5B9M | R-METAL | 3W 220-J | 103C19107 | 30 | 0.25 |

# RECOMMENDED SERVICE PARTS AND PRICE LIST

**MODEL NO.: SD5700C-US / SD5707C / SD5707C-PA / SD5705C-SD**

| SYMBOL NO. | DESCRIPTION | SPECIFICATION | PART NO. | MINIMUM P/O QTY | PRICE FOB @US$ |
|---|---|---|---|---|---|
| R 5D2 | R-METAL | 3W 15-J | 103C19003 | 30 | 0.25 |
| R 5D8M | R-METAL | 3W 12-J | 103C19002 | 30 | 0.25 |
| R 6RUM | R-METAL | 2W 6.8K-J | 103C18305 | 30 | 0.25 |
| R 902M | R-CEMENT-FUSE | 5W 20-J | P10900101 | 30 | 1.20 |
| R 906M | R-METAL | 3W 47K-J | 103C19405 | 30 | 0.25 |
| R 907M | R-METAL | 2W 18-J | 103C18004 | 30 | 0.25 |
| R 912M | R-METAL | 3W 0.27-J | 103C19703 | 30 | 0.25 |
| R 915M | R-METAL | 2W 10K-J | 103C18307 | 30 | 0.25 |
| R 952M | R-METAL | 3W 3.3-J | 103C19806 | 30 | 0.25 |
| R 954M | R-METAL | 1W 100-J | 103C17103 | 30 | 0.25 |
| R 957M | R-METAL | 2W 100-J | 103C18103 | 30 | 0.25 |
| R 965M | R-METAL | 1W 3.3K-J | 103C17301 | 30 | 0.25 |
| R 970M | R-METAL | 3W 10K-J | 103C19307 | 30 | 0.25 |
| RY501M | RELAY | JQ1AP-12V | P28700201 | 30 | 2.00 |
| RY901 | RELAY POWER | JWZASN-DC12V | P28700101 | 30 | 2.50 |
| T 501M | TRANS-HORIZ-DRIVE |  | CP336P01401 | 30 | 3.50 |
| T 502 | TRANS-FLYBACK |  | P33400801 | 30 | 30.00 |
| T 901 | TRANS-POWER |  | C35001801 | 30 | 7.50 |
|  | DOOR | [SD5700C-US] | CP702A00601 | 30 | 2.00 |
|  |  | [SD5707C / SD5707C-PA] | CP702A00602 | 30 | 2.00 |
|  |  | [SD5705C-SD] | CP702A00603 | 30 | 2.00 |
|  | CONTROL-PANEL | [SD5700C-US/SD5707C/SD5705C-SD] | CP437B00701 | 30 | 6.00 |
|  |  | [SD5707C-PA] | CP437B00702 | 30 | 6.00 |
|  | IB-DISPLAY | [SD5700C-US] | C87102704 | 30 | 3.00 |
|  |  | [SD5707C] | C87102703 | 30 | 3.00 |
|  |  | [SD5707C-PA] | C87102801 | 30 | 3.00 |
|  |  | [SD5705C-SD] | C87102706 | 30 | 3.00 |
|  | WARRANTY-SET | [SD5700C-US] | CP870C06001 | 30 | 1.00 |
|  | POST CARD | [SD5707C] | CP870C03304 | 30 | 1.00 |

# RECOMMENDED SERVICE PARTS AND PRICE LIST

**MODEL NO.: SD5700C-US / SD5707C / SD5707C-PA / SD5705C-SD**

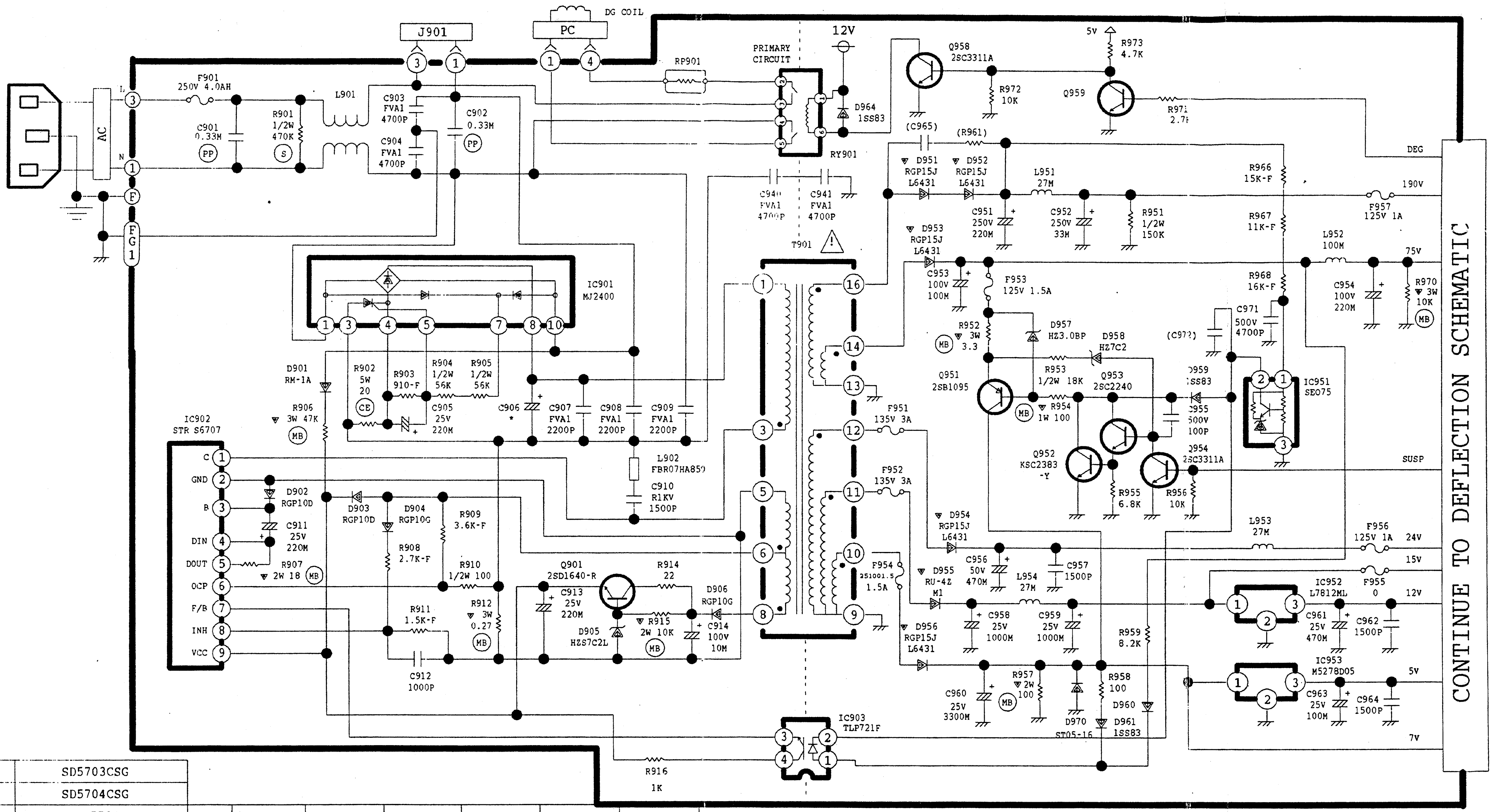
**REVISION : 20/OCT/1995**
**ISSUED: 25/SEPT/1995**
**PAGE : 5 / 6**

| SYMBOL NO. | DESCRIPTION | SPECIFICATION | PART NO. | MINIMUM P/O QTY | PRICE FOB @US$ |
|---|---|---|---|---|---|
| | SWITCHING-ADAPTER | [SD5707C] | CP452P15502 | 30 | 15.00 |
| | | [SD5707C-PA] | CP452P15503 | 30 | 15.00 |
| | ADAPTER | [SD5707C] | CP452P15601 | 30 | 5.00 |
| | | [SD5707C-PA] | CP452P15602 | 30 | 5.00 |
| | CARD-WARRANTY | [SD5707C] | CP879B00801 | 30 | 1.00 |
| | | [SD5705C-SD] | C87200101 | 30 | 2.50 |
| | KNOB | [SD5707C / SD5707C-PA] | CP703B03002 | 30 | 3.00 |
| | | [SD5705C-SD] | CP703B03003 | 30 | 3.00 |
| | JAN CODE LABEL | [SD5707C] | CP850D22001 | 30 | 2.00 |
| | | [SD5707C-PA] | D85307301 | 30 | 2.00 |
| | BACK COVER | [SD5700C-US] | CP700A12801 | 30 | 20.00 |
| | | [SD5707C / SD5707C-PA] | CP700A12803 | 30 | 20.00 |
| | | [SD5705C-SD] | CP700A12804 | 30 | 20.00 |
| | PACKING CASE | [SD5700C-US] | CP802C15702 | 30 | 5.50 |
| | | [SD5707C] | CP802C15701 | 30 | 5.50 |
| | | [SD5707C-PA] | C80206101 | 30 | 6.50 |
| | CUSHION | [CP803A06101,02,03,04,05,06,07,08] | CP803A061 | 30 | 4.50 |
| | RATING LABEL | [SD5700C-US] | CP775C18701 | 30 | 0.80 |
| | | [SD5707C] | CP775C18901 | 30 | 0.80 |
| | | [SD5707C-PA] | C77505502 | 30 | 0.80 |
| | AC POWER CORD | [SD5700C-US / SD5707C] | CP242C14502 | 30 | 4.00 |
| | | [SD5707C-PA] | CP242C16502 | 30 | 4.00 |
| | | [SD5705C-SD] | CP242C17002 | 30 | 12.00 |
| | SIGNAL CABLE | | CP242C16106 | 30 | 15.00 |
| | BEZEL UNIT | [SD5700C-US] | CP720B04602 | 30 | 16.00 |
| | | [SD5707C] | CP720B04601 | 30 | 16.00 |
| | | [SD5707C-PA] | CP720B04603 | 30 | 16.00 |
| | | [SD5705C-SD] | CP720B04604 | 30 | 16.00 |
| | ASSY TILT SWIVEL STAND | [SD5700C-US] | TC96000920 | 10 | 8.00 |

# RECOMMENDED SERVICE PARTS AND PRICE LIST

**MODEL NO.: SD5700C-US / SD5707C / SD5707C-PA / SD5705C-SD**

| SYMBOL NO. | DESCRIPTION | SPECIFICATION | PART NO. | MINIMUM P/O QTY | PRICE FOB @US$ |
|---|---|---|---|---|---|
| | | [SD5707C / SD5707C-PA] | TC96000910 | 10 | 8.00 |
| | | [SD5705C-SD] | TC96000930 | 10 | 8.00 |
| | ASSY PWB MAIN | [SD5700C-US] | TB92110020 | 10 | 200.00 |
| | | [SD5707C / SD5707C-PA] | TB92110010 | 10 | 200.00 |
| | | [SD5705C-SD] | TB92110040 | 10 | 200.00 |
| | ASSY PWB SET | [SD5700C-US] | TB92110220 | 10 | 60.00 |
| | | [SD5707C / SD5707C-PA] | TB92110210 | 10 | 60.00 |
| | | [SD5705C-SD] | TB92110230 | 10 | 60.00 |


J901
PC
DG COIL
AC
L
N
F
F G 1
F901 250V 4.0AH
C901 0.33M
PP
R901 1/2W 470K
S
L901
C903 FVA1 4700P
C904 FVA1 4700P
C902 0.33M
PP
RP901
PRIMARY CIRCUIT
12V
D964 1SS83
RY901
C940 FVA1 4700P
C941 FVA1 4700P
T901
IC901 MJ2400
D901 RM-1A
R906 3W 47K
MB
R902 5W 20
CE
R903 910-F
R904 1/2W 56K
R905 1/2W 56K
C905 25V 220M
C906 *
C907 FVA1 2200P
C908 FVA1 2200P
C909 FVA1 2200P
L902 FBR07HA85
C910 R1KV 1500P
IC902 STR S6707
C
GND
B
DIN
DOUT
OCP
F/B
INH
VCC
D902 RGP10D
C911 25V 220M
R907 2W 18
MB
D903 RGP10D
D904 RGP10G
R909 3.6K-F
R908 2.7K-F
R910 1/2W 100
R911 1.5K-F
C912 1000P
R912 3W 0.27
MB
Q901 2SD1640-R
C913 25V 220M
D905 HZS7C2L
R914 22
R915 2W 10K
MB
D906 RGP10G
C914 100V 10M
IC903 TLP721F
R916 1K
Q958 2SC3311A
5V
R973 4.7K
R972 10K
Q959
R971 2.7K
(C965)
(R961)
D951 RGP15J L6431
D952 RGP15J L6431
L951 27M
C951 250V 220M
C952 250V 33M
R951 1/2W 150K
D953 RGP15J L6431
C953 100V 100M
F953 125V 1.5A
R952 3W 3.3
MB
D957 HZ3.0BP
D958 HZ7C2
Q951 2SB1095
R953 1/2W 18K
Q953 2SC2240
R954 1W 100
MB
Q952 KSC2383 -Y
R955 6.8K
R956 10K
Q954 2SC3311A
D959 1SS83
C955 500V 100P
(C973)
C971 500V 4700P
IC951 SE075
F951 135V 3A
F952 135V 3A
D954 RGP15J L6431
F954 2S1001.5 1.5A
D955 RU-4Z M1
C956 50V 470M
L954 27M
C957 1500P
D956 RGP15J L6431
C958 25V 1000M
C959 25V 1000M
C960 25V 3300M
R957 2W 100
MB
D970 ST05-16
R958 100
D960
D961 1SS83
R959 8.2K
R966 15K-F
R967 11K-F
R968 16K-F
L952 100M
C954 100V 220M
R970 3W 10K
MB
F957 125V 1A
190V
75V
DEG
SUSP
L953 27M
F956 125V 1A
24V
15V
IC952 L7812ML
F955 0
12V
C961 25V 470M
C962 1500P
IC953 M5278D05
5V
C963 25V 100M
C964 1500P
7V
CONTINUE TO DEFLECTION SCHEMATIC

| ITEM | MODEL |
|---|---|
| 6 | SD5703CSG |
| 5 | SD5704CSG |
| 4 | SD5704C |
| 3 | SD5700C, 02C, 03C |
| 2 | SD5705C-SD |
| 1 | |

| * | ITEM 1 | ITEM 2 | ITEM 3 | ITEM 4 | ITEM 5 | ITEM 6 |
|---|---|---|---|---|---|---|
| C906 | 250V 560M | 250V 560M | H400V 390M | H400V 390M | H400V 390M | H400V 390M |

COMPONENTS MARKED BY ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY.

PRIMARY COMPONENTS ARE SAFETY PART.

DIODE NOT LABEL IS 1S2076A/2471

CHANGE

DWG. ISSUED

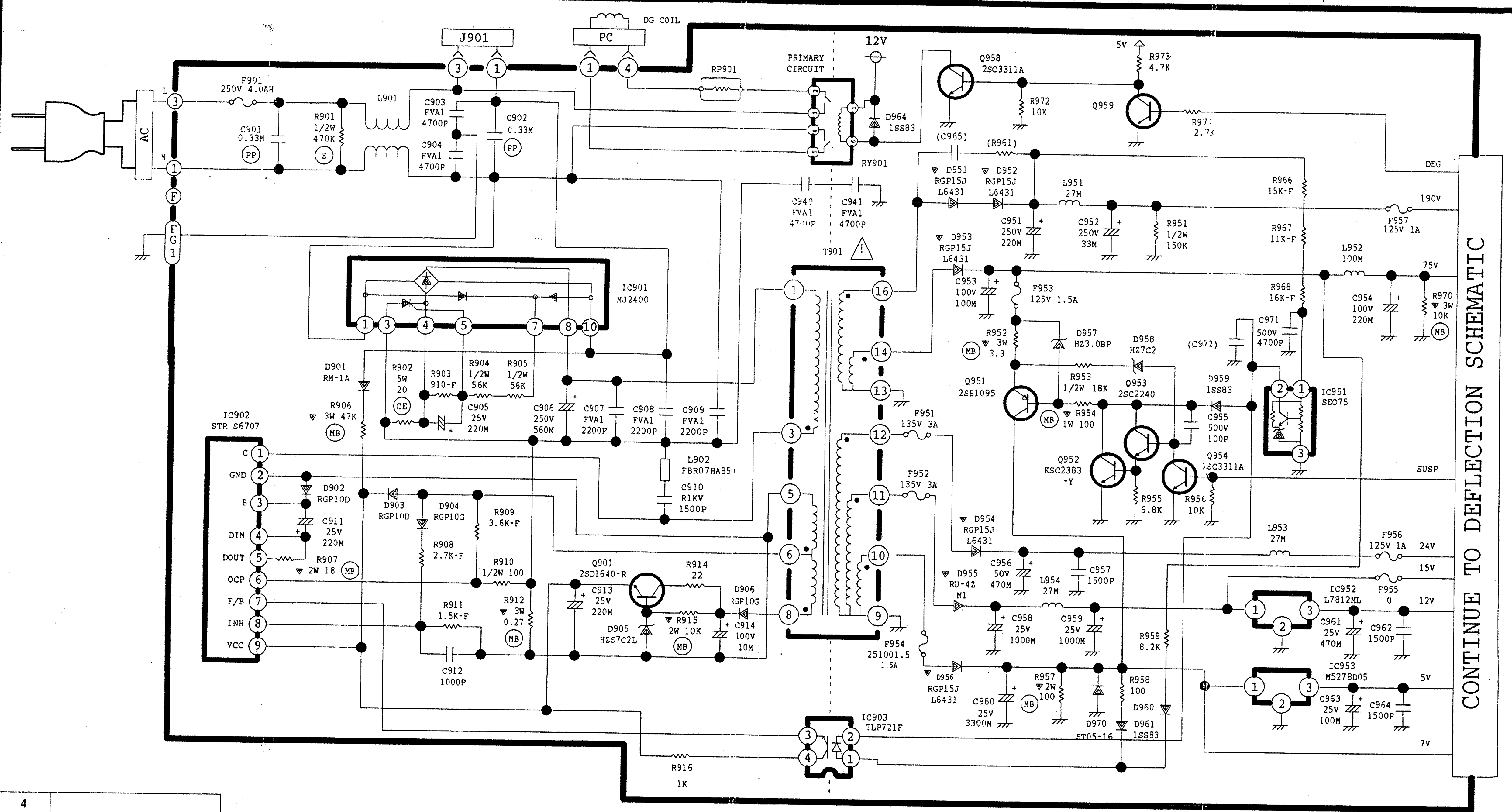
MITSUBISHI ELECTRONICS MFG. S'PORE

| DIM IN MM | SCALE : NTS | DATE : 26TH OCT 95 | |
|---|---|---|---|
| DRAWN | CHECKED | DESIGNED | APPROVED |

TITLE OF DRAWING

# POWER SCHEMATIC DIAGRAM

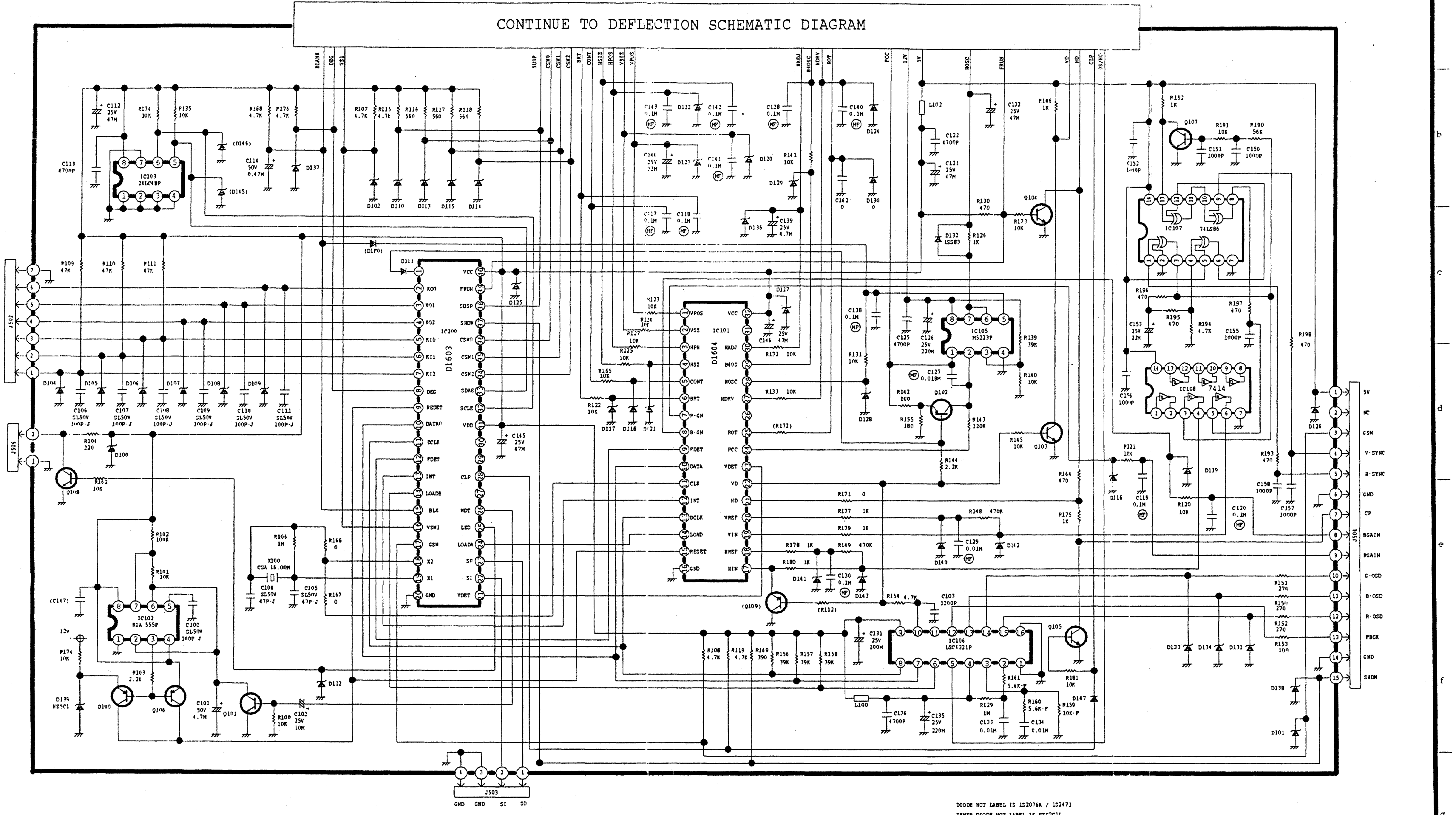
DRAWING NO.


J901
PC
DG COIL
AC
L
N
F901 250V 4.0AH
C901 0.33M
R901 1/2W 470K
L901
C903 FVA1 4700P
C904 FVA1 4700P
C902 0.33M
FG1
RP901
PRIMARY CIRCUIT
12V
D964 1SS83
RY901
C940 FVA1 4700P
C941 FVA1 4700P
T901
IC901 MJ2400
D901 RM-1A
R906 3W 47K
R902 5W 20
R903 910-F
R904 1/2W 56K
R905 1/2W 56K
C905 25V 220M
C906 250V 560M
C907 FVA1 2200P
C908 FVA1 2200P
C909 FVA1 2200P
L902 FBR07HA850
C910 R1KV 1500P
IC902 STR S6707
C
GND
B
DIN
DOUT
OCP
F/B
INH
VCC
D902 RGP10D
D903 RGP10D
D904 RGP10G
C911 25V 220M
R907 2W 18
R908 2.7K-F
R909 3.6K-F
R910 1/2W 100
R911 1.5K-F
R912 3W 0.27
C912 1000P
Q901 2SD1640-R
C913 25V 220M
R914 22
D905 HZS7C2L
R915 2W 10K
D906 RGP10G
C914 100V 10M
IC903 TLP721F
R916 1K
Q958 2SC3311A
R972 10K
Q959
5V
R973 4.7K
R971 2.7K
(C965)
(R961)
D951 RGP15J L6431
D952 RGP15J L6431
L951 27M
C951 250V 220M
C952 250V 33M
R951 1/2W 150K
D953 RGP15J L6431
C953 100V 100M
F953 125V 1.5A
R952 3W 3.3
D957 HZ3.0BP
D958 HZ7C2
Q951 2SB1095
R953 1/2W 18K
R954 1W 100
Q953 2SC2240
Q952 KSC2383-Y
Q954 2SC3311A
R955 6.8K
R956 10K
D959 1SS83
C955 500V 100P
(C972)
C971 500V 4700P
IC951 SE075
R966 15K-F
R967 11K-F
R968 16K-F
L952 100M
C954 100V 220M
R970 3W 10K
F957 125V 1A
F951 135V 3A
F952 135V 3A
D954 RGP15J L6431
C956 50V 470M
L954 27M
C957 1500P
L953 27M
F956 125V 1A
D955 RU-42 M1
C958 25V 1000M
C959 25V 1000M
F954 251001.5 1.5A
D956 RGP15J L6431
C960 25V 3300M
R957 2W 100
D970 ST05-16
R958 100
D960
D961 1SS83
R959 8.2K
IC952 L7812ML
F955 0
C961 25V 470M
C962 1500P
IC953 M5278D05
C963 25V 100M
C964 1500P
DEG
190V
75V
SUSP
24V
15V
12V
5V
7V
CONTINUE TO DEFLECTION SCHEMATIC
(MB)
(PP)
(S)
(CE)

| | |
|---|---|
| 4 | |
| 3 | |
| 2 | |
| 1 | SD5707C/07C-PA |
| ITEM | MODEL |

COMPONENTS MARKED BY ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY.
PRIMARY COMPONENTS ARE SAFETY PART.
DIODE NOT LABEL IS 1S2076A/2471

| CHANGE | DWG. ISSUED | MITSUBISHI ELECTRONICS MFG. S'PORE | | | | TITLE OF DRAWING | POWER SCHEMATIC DIAGRAM |
|---|---|---|---|---|---|---|---|
| | ○<br>○<br>○ | DIM IN MM | SCALE : NTS | DATE : 26TH OCT 95 | | | |
| | | DRAWN | CHECKED | DESIGNED | APPROVED | DRAWING NO. | |


CONTINUE TO DEFLECTION SCHEMATIC DIAGRAM
IC103 24LC08P
IC100 D1603
IC101 D1604
IC102 RIA 555P
IC105 M5223P
IC106 LSC4321P
IC107 74LS86
IC108 7414
J501
J502
J503
J504
J505
X100 CSA 16.00M
GND GND SI SO
5V
NC
CSN
V-SYNC
H-SYNC
GND
CP
BGAIN
RGAIN
G-OSD
B-OSD
R-OSD
FBCK
GND
SHDN

DIODE NOT LABEL IS 1S2076A / 1S2471
ZENER DIODE NOT LABEL IS HZS7C1L
CAPACITOR NOT LABEL IS B50V 0.01MF·K
BEAD FERRITE NOT LABEL IS FBP07HA850
TRANSISTOR (NPN) 2SC3311A
(PNP) 2SA1207S

| ITEM | MODEL |
|---|---|
| 4 | SD5704C |
| 3 | SD5700C, 02, 03C |
| 2 | SD5705C-SD |
| 1 | SD5707C/C-PA |

CHANGE

DWG. ISSUED

MITSUBISHI ELECTRONICS MFG. S'PORE

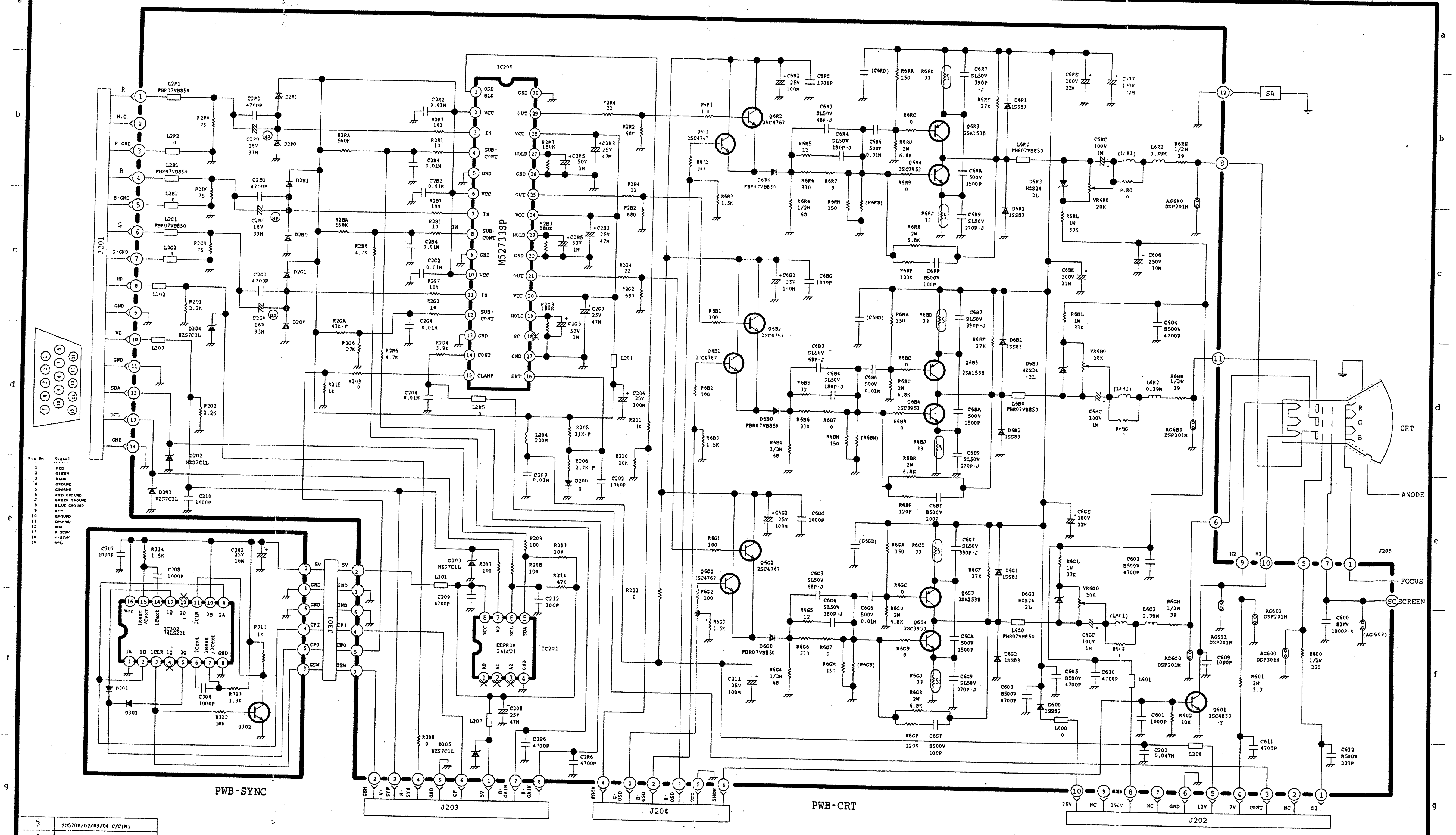
DIM IN MM | SCALE : NTS | DATE : 26TH OCT 95

DRAWN | CHECKED | DESIGNED | APPROVED

TITLE OF DRAWING

# CONTROL
# SCHEMATIC DIAGRAM

DRAWING NO.


J201
R
N.C.
P-GND
B
B-GND
G
G-GND
HD
GND
VD
SDA
SCL
L2P1 FBR07VB850
L2B1 FBR07VB850
L2G1 FBR07VB850
P2P0 75
P2B0 75
P2G0 75
C2P1 4700P
C2B1 4700P
C2G1 4700P
C2P0 16V 33M
C2B0 16V 33M
C2G0 16V 33M
D2P1
D2P0
D2B1
D2B0
D2G1
D2G0
R201 2.2K
R202 2.2K
D204 HZS7C1L
D202 HZS7C1L
D201 HZS7C1L
C210 1000P
L202
L203
IC200
M52733SP
OSD BLK
VCC
IN
SUB-CONT
GND
OUT
HOLD
NC
CONT
CLAMP
BRT
C2R2 0.01M
R2R7 100
R2R1 10
C2R4 0.01M
C2B2 0.01M
R2B7 100
R2B1 10
C2B4 0.01M
C2G2 0.01M
R2G7 100
R2G1 10
C2G4 0.01M
R2RA 560K
R2BA 560K
R2GA 43K-F
R2B6 4.7K
R2G5 27K
R2R6 4.7K
R215 1K
R203 0
R204 3.9K
C204 0.01M
L205 0
R2R4 22
R2R2 680
R2R3 180K
C2R3 25V 47M
C2R5 50V 1M
R2B4 22
R2B2 680
R2B3 180K
C2B3 25V 47M
C2B5 50V 1M
R2G4 22
R2G2 680
R2G3 180K
C2G3 25V 47M
C2G5 50V 1M
L201
C206 25V 100M
R211 1K
L204 220M
C203 0.01M
R205 13K-F
R206 2.7K-F
D200 0
R210 10K
C202 1000P
R212 0
C307 1000P
R314 1.5K
C308 1000P
C302 25V 10M
IC302 74LS221
1Rext/Cext
1Cext
1Q
2Q
2CLR
2B
2A
1A
1B
1CLR
2Cext
2Rext/2Cext
D301
D302
C306 1000P
R313 1.3K
R312 10K
Q302
R311 1K
J301
5V
GND
CPI
CPO
GSW
D203 HZS7C1L
R207 100
L301
C209 4700P
R209 100
R208 100
R213 10K
R214 47K
C212 100P
IC201
EEPROM 24LC21
WP
SCL
SDA
A0
A1
A2
C208 25V 47M
L207
R308 0
D205 HZS7C1L
C2B6 4700P
C2R6 4700P
PWB-SYNC
J203
GSW
V-SYN
H-SYN
GND
CP
5V
B-GAIN
R-GAIN
J204
FBCK
G-OSD
B-OSD
R-OSD
SBD
SHDW
PWB-CRT
Q6R2 2SC4767
Q6R1 2SC4767
R6P1 10
C6R2 25V 100M
C6RG 1000P
C6R3 SL50V 68P-J
R6R5 12
C6R4 SL50V 180P-J
C6R6 500V 0.01M
R6RU 2W 6.8K
R6RC 0
Q6R3 2SA1538
Q6R4 2SC3953
D6P0 FBR07VB850
R6R6 330
R6R7 0
R6R4 1/2W 68
R6RM 150
R6R9 0
R6RJ 33
R6RR 2W 6.8K
R6RP 120K
C6RF B500V 100P
R6RA 150
R6RD 33
C6R7 SL50V 390P-J
R6RF 27K
D6R1 1SS83
C6PA 500V 1500P
C6R9 SL50V 270P-J
D6R3 HZS24-2L
D6R2 1SS83
L6R0 FBR07VB850
C6RE 100V 22M
C607 1M
C6RC 100V 1M
VR6R0 20K
R6RL 1M 33K
L6R2 0.39M
R6RH 1/2W 39
AG6R0 DSP201M
C606 250V 10M
SA
Q6B2 2SC4767
Q6B1 2SC4767
R6B1 100
R6B2 100
R6B3 1.5K
C6B2 25V 100M
C6BC 1000P
C6B3 SL50V 68P-J
C6B4 SL50V 180P-J
C6B6 500V 0.01M
Q6B3 2SA1538
Q6B4 2SC3953
D6B0 FBR07VB850
R6B6 330
R6B7 0
R6B4 1/2W 68
R6BM 150
R6BA 150
R6BD 33
C6B7 SL50V 390P-J
R6BF 27K
D6B1 1SS83
D6B3 HZS24-2L
C6BA 500V 1500P
C6B9 SL50V 270P-J
D6B2 1SS83
R6BR 2W 6.8K
R6BP 120K
C6BF B500V 100P
L6B0 FBR07VB850
C6BE 100V 22M
R6BL 1M 33K
C604 B500V 4700P
VR6B0 20K
L6B2 0.39M
R6BH 1/2W 39
C6BC 100V 1M
AG6B0 DSP201M
Q6G2 2SC4767
Q6G1 2SC4767
R6G1 100
R6G2 100
R6G3 1.5K
C6G2 25V 100M
C6GC 1000P
C6G3 SL50V 68P-J
C6G4 SL50V 180P-J
C6G6 500V 0.01M
Q6G3 2SA1538
Q6G4 2SC3953
D6G0 FBR07VB850
R6G6 330
R6G7 0
R6G4 1/2W 68
R6GM 150
R6GA 150
R6GD 33
C6G7 SL50V 390P-J
R6GF 27K
D6G1 1SS83
D6G3 HZS24-2L
C6GA 500V 1500P
C6G9 SL50V 270P-J
D6G2 1SS83
R6GR 2W 6.8K
R6GP 120K
C6GF B500V 100P
L6G0 FBR07VB850
C6GE 100V 22M
R6GL 1M 33K
C602 B500V 4700P
VR6G0 20K
L6G2 0.39M
R6GH 1/2W 39
C6GC 100V 1M
AG6G0 DSP201M
AG601 DSP201M
AG602 DSP201M
AG600 DSP301M
AG603
C211 25V 100M
C603 B500V 4700P
C605 B500V 4700P
C610 4700P
C609 1000P
D600
L600 0
L601
C601 1000P
R602 10K
Q601 2SC4833-Y
C201 0.047M
L206
C611 4700P
R601 3W 3.3
R600 1/2W 220
C600 B2KV 1000P-K
C612 B500V 220P
CRT
ANODE
FOCUS
SC SCREEN
J205
H2
H1
J202
75V
NC
12V
7V
CONT
G1
DIODE NOT LABEL IS 1S2076A/2471
FERRITE BEAD NOT LABEL IS FBR07HA850

| Pin No. | Signal |
|---|---|
| 1 | RED |
| 2 | GREEN |
| 3 | BLUE |
| 4 | GROUND |
| 5 | GROUND |
| 6 | RED GROUND |
| 7 | GREEN GROUND |
| 8 | BLUE GROUND |
| 9 | NC |
| 10 | GROUND |
| 11 | GROUND |
| 12 | SDA |
| 13 | H-SYNC |
| 14 | V-SYNC |
| 15 | SCL |

| ITEM | MODEL |
|---|---|
| 3 | SD5700/02/03/04 C/C(M) |
| 2 | SD5705 C/C(M) |
| 1 | SD5707 C/C(M) |

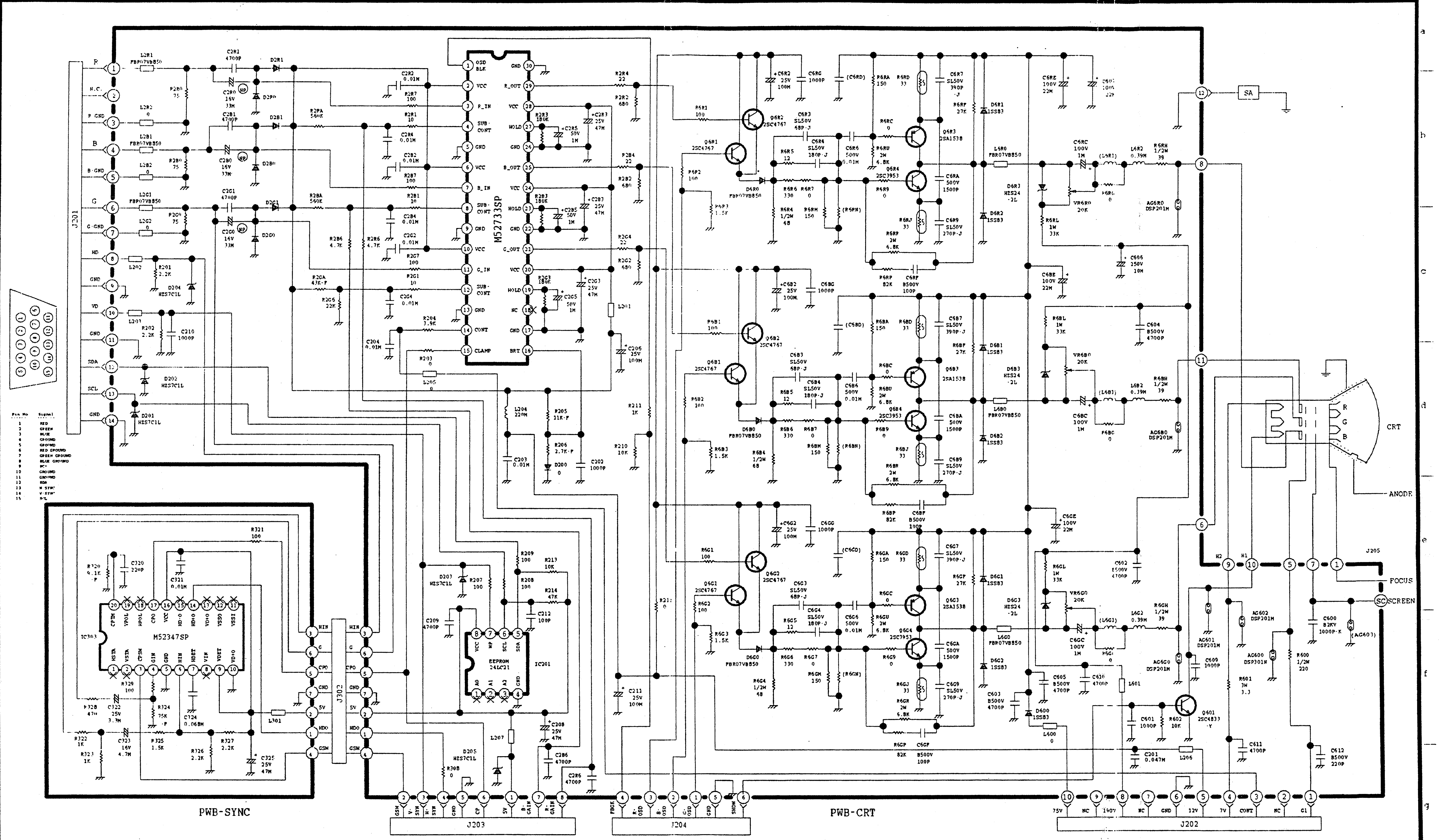
CHANGE

| DWG. ISSUED | MITSUBISHI ELECTRONICS MFG. S'PORE | | | |
|---|---|---|---|---|
| | DIM IN MM | SCALE : NTS | DATE : 26th OCT 95 | |
| | DRAWN | CHECKED | DESIGNED | APPROVED |

TITLE OF DRAWING

VIDEO, CRT
SCHEMATIC DIAGRAM

DRAWING NO.


J201
M52733SP
M52347SP
IC303
EEPROM 24LC21
IC201
J302
PWB-SYNC
PWB-CRT
J203
J204
J202
J205
CRT
ANODE
FOCUS
SCREEN
SA
R
G
B

DIODE NOT LABEL IS 1S2076A/2471
FERRITE BEAD NOT LABEL IS FBR07HA850

| | |
|---|---|
| 6 | |
| 5 | |
| 4 | SD570*CSG |
| ITEM | MODEL |

CHANGE

DWG. ISSUED

MITSUBISHI ELECTRONICS MFG. S'PORE

DIM IN MM | SCALE : NTS | DATE : 26TH OCT 95

DRAWN | CHECKED | DESIGNED | APPROVED

TITLE OF DRAWING

# SYNC ON GREEN, VIDEO SET
# SCHEMATIC DIAGRAM

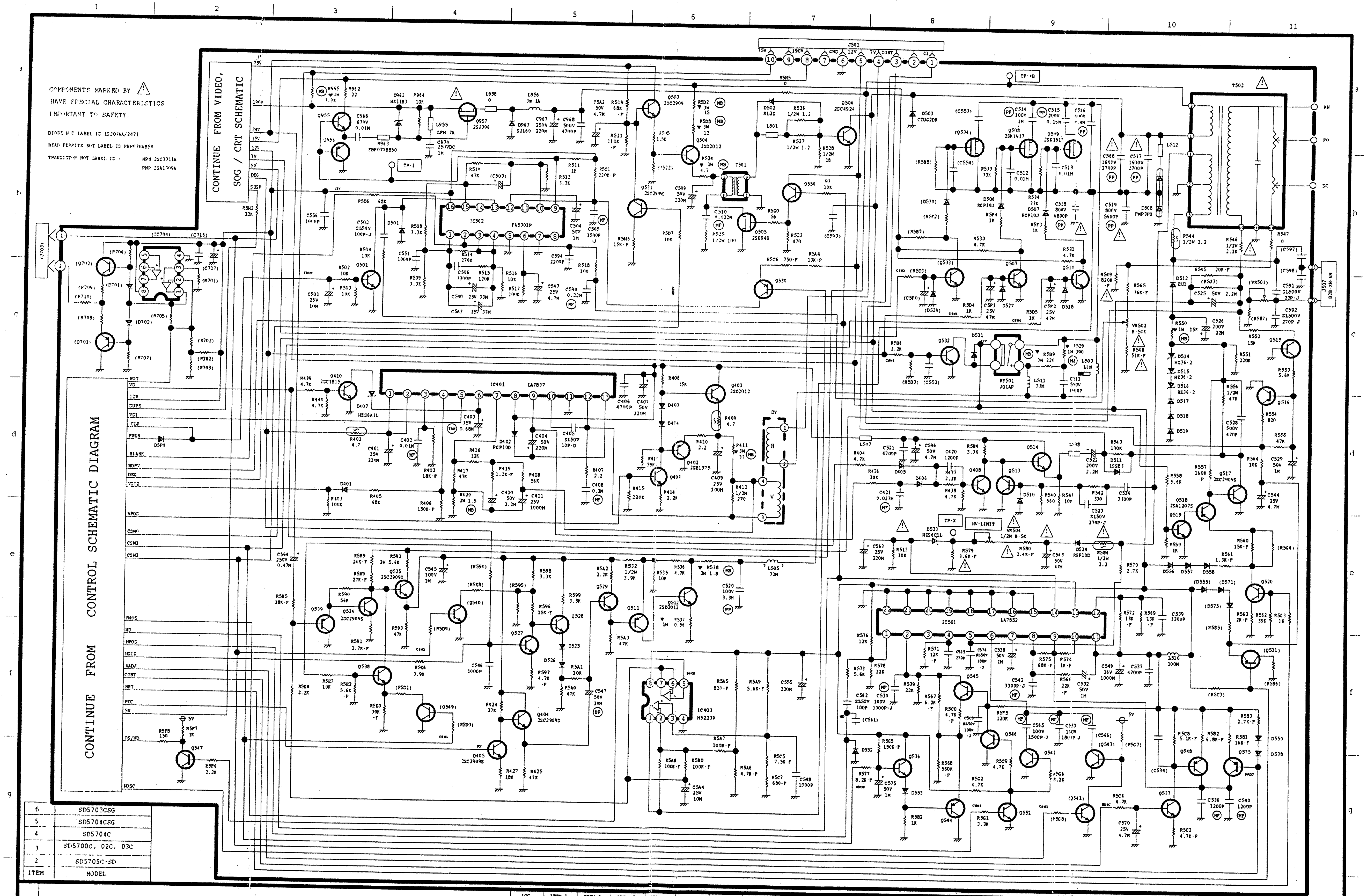
DRAWING NO.

COMPONENTS MARKED BY ⚠
HAVE SPECIAL CHARACTERISTICS
IMPORTANT TO SAFETY.

DIODE NOT LABEL IS 1S2076A/2471

BEAD FERRITE NOT LABEL IS FBR07HA850

TRANSISTOR NOT LABEL IS : NPN 2SC3311A
PNP 2SA1309A


CONTINUE FROM VIDEO, SOG / CRT SCHEMATIC
CONTINUE FROM CONTROL SCHEMATIC DIAGRAM
J501
IC502 TA5301P
IC401 LA7837
IC501 LA7852
IC403 M5223P
T501
T502
TP-1
TP-B
TP-X
HV-LIMIT
RY501
DY
H
V
AH
FO
SC
J507 B2B-XH-AM
(IC704)
(C716)
(Q701)
(Q702)
HOT
VD
12V
SUPE
YS1
CLP
FRUN
BLANK
HDEV
DEG
VSIZ
VPOS
CSW1
CSW2
CSW3
R40S
HD
HPOS
HSIZ
HADJ
CONT
HPT
PCC
5V
OS/HD
HOSC

| 6 | SD5703CSG |
|---|---|
| 5 | SD5704CSG |
| 4 | SD5704C |
| 3 | SD5700C, 02C, 03C |
| 2 | SD5705C-SD |
| ITEM | MODEL |

CHANGE

| LOC | ITEM 1 | ITEM 2 | ITEM 3 | ITEM 4 | ITEM 5 | ITEM 6 |
|---|---|---|---|---|---|---|
| C591 | NIL | NIL | NIL | NIL | SL500V 22P-J | SL500V 22P-J |
| C592 | NIL | NIL | NIL | NIL | SL500V 270P-J | SL500V 270P-J |
| J507 | NIL | NIL | NIL | NIL | B2B-XH-AM | B2B-XH-AM |

DWG. ISSUED

MITSUBISHI ELECTRONICS MFG. S'PORE

| DIM IN MM | SCALE : NTS | DATE: 25TH OCT 1995 | |
|---|---|---|---|
| DRAWN | CHECKED | DESIGNED | APPROVED |
| | | | |

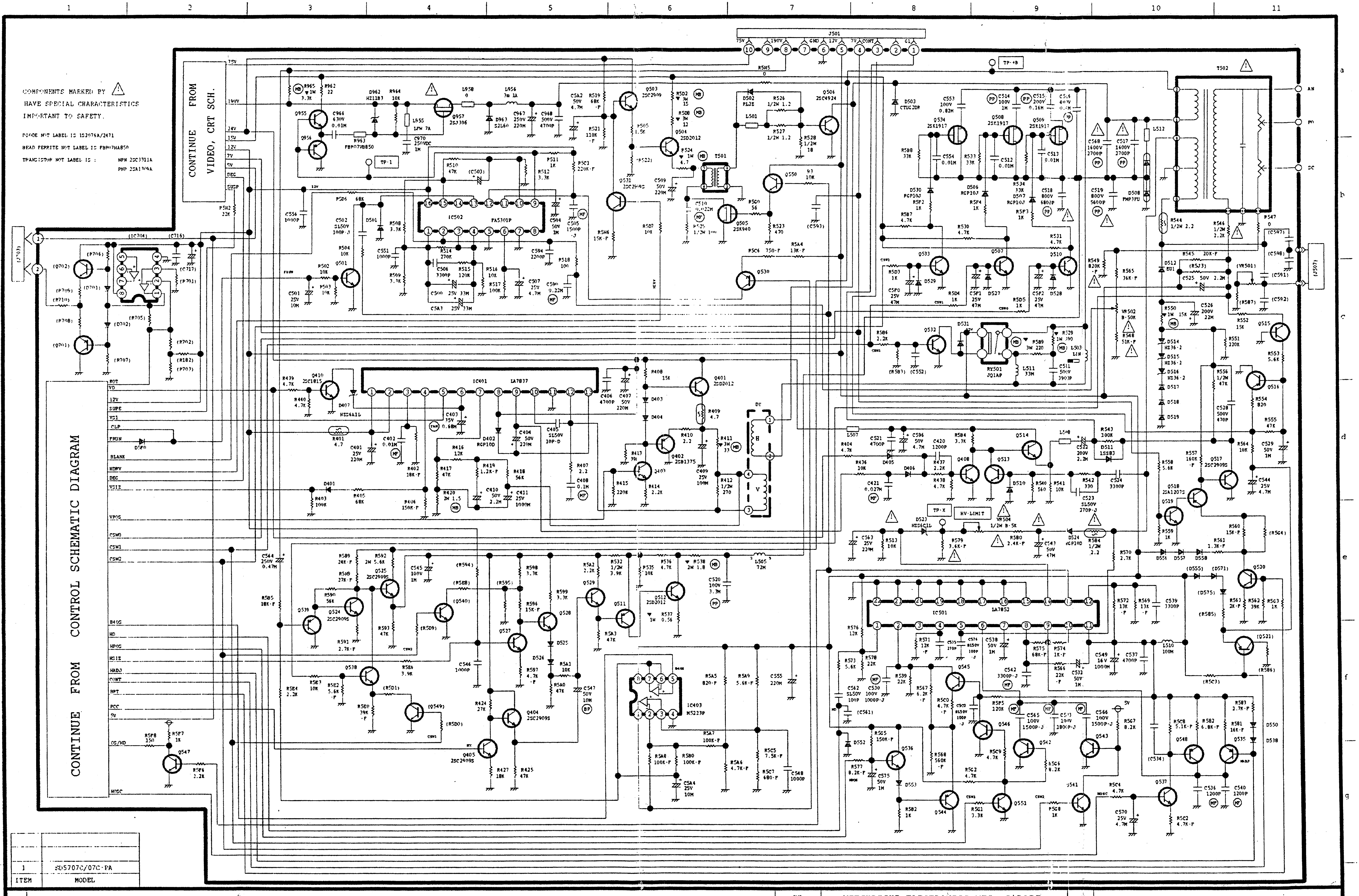
TITLE OF DRAWING

# DEFLECTION
# SCHEMATIC DIAGRAM

DRAWING NO.

COMPONENTS MARKED BY ⚠
HAVE SPECIAL CHARACTERISTICS
IMPORTANT TO SAFETY.

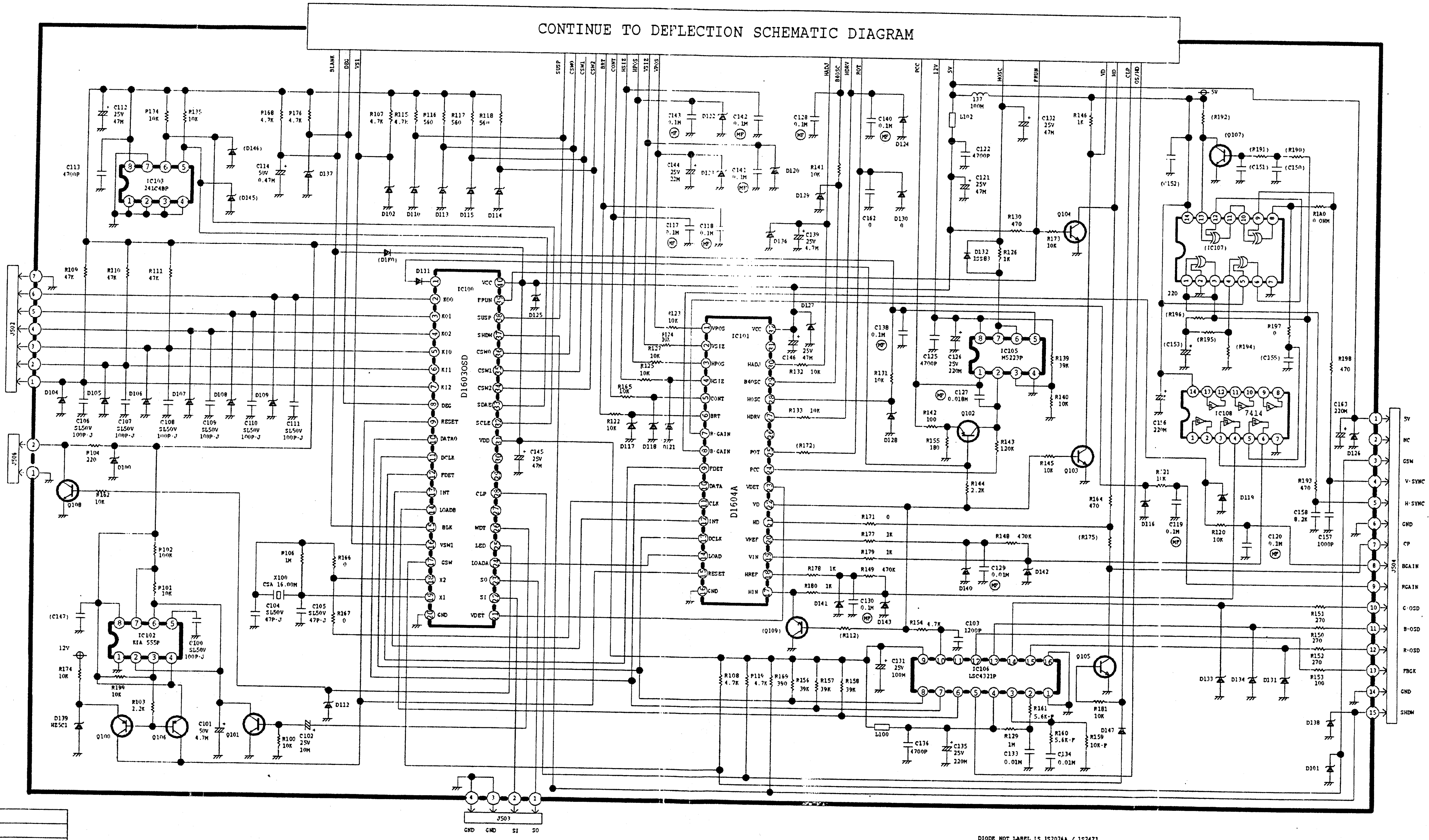
DIODE NOT LABEL IS 1S2076A/2471
BEAD FERRITE NOT LABEL IS FBP07HA850
TRANSISTOR NOT LABEL IS : NPN 2SC3311A
PNP 2SA1309A


CONTINUE FROM VIDEO, CRT SCH.
CONTINUE FROM CONTROL SCHEMATIC DIAGRAM
J501
75V
190V
GND
12V
7V
CONT
G1
T501
T502
AN
FO
SC
DY
H
V
IC401 LA7837
IC501 LA7852
IC502 PA5301P
IC403 NJM2903
IC704
TP-1
TP-B
TP-X
HV-LIMIT
RY501
ROT
VD
12V
SUPE
VS1
CLP
FRUN
BLANK
HDPV
DEC
VS12
VPOS
CSMD
CSM1
CSM2
B40G
HD
HPOS
HSIZ
HADJ
CONT
BRT
PCC
5V
CS/HD
HOSC
25V
190V
24V
15V
12V
7V
5V
DEC
SUSP

| ITEM | MODEL |
|---|---|
| 1 | SD5707C/07C-PA |

CHANGE

| DWG. ISSUED | MITSUBISHI ELECTRONICS MFG. S'PORE | | | | TITLE OF DRAWING | DEFLECTION SCHEMATIC DIAGRAM |
|---|---|---|---|---|---|---|
| | DIM IN MM | SCALE : NTS | DATE: 26TH OCT 1995 | | | |
| | DRAWN | CHECKED | DESIGNED | APPROVED | | |
| | | | | | DRAWING NO. | |



CONTINUE TO DEFLECTION SCHEMATIC DIAGRAM
BLANK
DEG
VS1
SUSP
CSM0
CSM1
CSM2
BRT
CONT
HSIZ
HPOS
VSIZ
VPOS
HADJ
B4OSC
HDRV
POT
PCC
12V
5V
HOSC
FPUN
VD
HD
CLP
OS/HD
IC103
24LC4BP
IC100
D16030SD
IC101
D1604A
IC105
M5223P
IC107
IC108
7414
IC102
KIA 555P
IC106
LSC4321P
X100
CSA 16.00M
Q100
Q101
Q102
Q103
Q104
Q105
Q106
Q107
Q108
Q109
J502
J504
J503
J506
GND
GND
SI
SO
5V
NC
CSM
V-SYNC
H-SYNC
GND
CP
BGAIN
RGAIN
G-OSD
B-OSD
R-OSD
FBCK
GND
SHDW
12V
L100
L102
D139
HZ5C1

DIODE NOT LABEL IS 1S2076A / 1S2471
ZENER DIODE NOT LABEL IS HZS7C1L
CAPACITOR NOT LABEL IS B50V 0.01MF-K
BEAD FERRITE NOT LABEL IS PBRO7HAB50
TRANSISTOR (NPN) 2SC3311A
(PNP) 2SA1207S

| ITEM | MODEL |
|---|---|
| 8 | |
| 7 | |
| 6 | SD5703CSG |
| 5 | SD5704CSG |
| 4 | |
| 3 | |
| 2 | |
| 1 | |

CHANGE

DWG. ISSUED

MITSUBISHI ELECTRONICS MFG. S'PORE

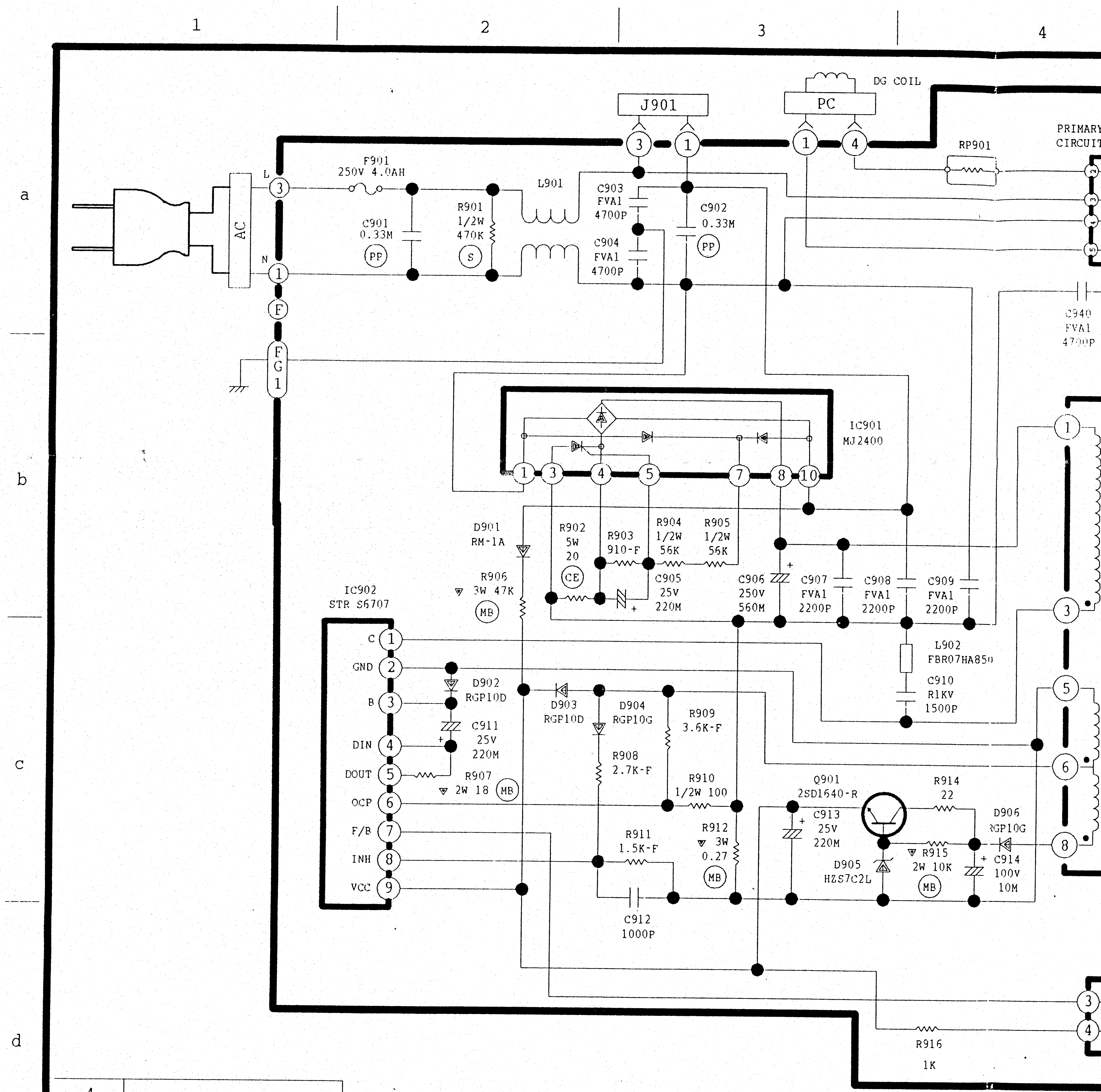
DIM IN MM
SCALE : NTS
DATE :26TH OCT 95

DRAWN
CHECKED
DESIGNED
APPROVED

TITLE OF DRAWING

# CONTROL
# SCHEMATIC DIAGRAM

DRAWING NO.


1
2
3
4
a
b
c
d
J901
PC
DG COIL
PRIMARY
CIRCUIT
RP901
L
N
AC
F
F
G
1
F901
250V 4.0AH
C901
0.33M
PP
R901
1/2W
470K
S
L901
C903
FVA1
4700P
C904
FVA1
4700P
C902
0.33M
PP
C940
FVA1
4700P
IC901
MJ2400
D901
RM-1A
R902
5W
20
CE
R903
910-F
R904
1/2W
56K
R905
1/2W
56K
C905
25V
220M
C906
250V
560M
C907
FVA1
2200P
C908
FVA1
2200P
C909
FVA1
2200P
R906
3W 47K
MB
IC902
STR S6707
C
GND
B
DIN
DOUT
OCP
F/B
INH
VCC
L902
FBR07HA850
C910
R1KV
1500P
D902
RGP10D
C911
25V
220M
D903
RGP10D
D904
RGP10G
R909
3.6K-F
R908
2.7K-F
R907
2W 18
MB
R910
1/2W 100
Q901
2SD1640-R
R914
22
D906
RGP10G
C913
25V
220M
R911
1.5K-F
R912
3W
0.27
MB
D905
HZS7C2L
R915
2W 10K
MB
C914
100V
10M
C912
1000P
R916
1K

| | |
|---|---|
| 4 | |
| 3 | |
| 2 | |
| 1 | SD5707C/07C-PA |
| ITEM | MODEL |

CHANGE

DWG.
ISSUED

MITSUBISHI ELECTRO

DIM IN MM

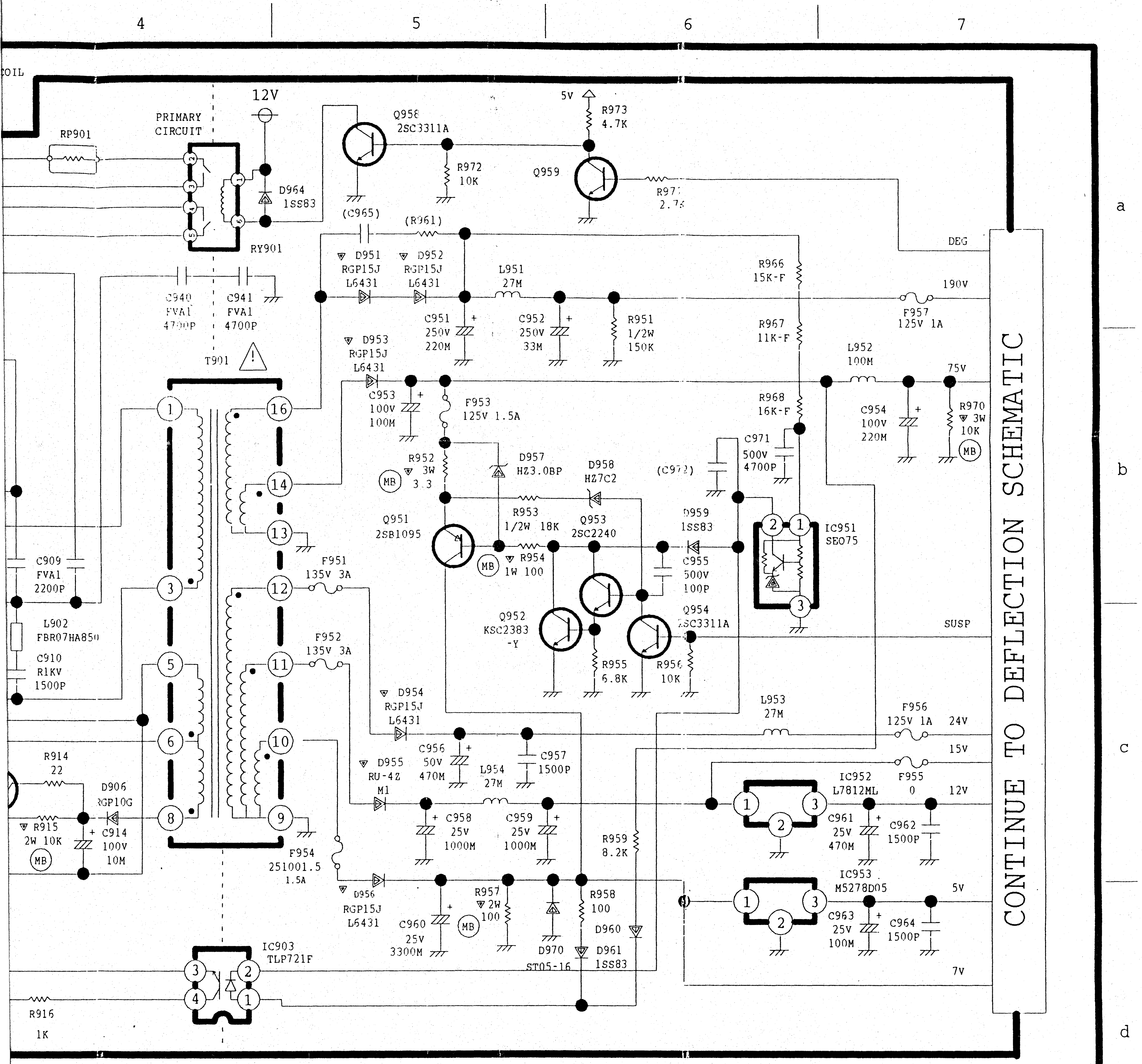
SCALE : NT

DRAWN

CHECKED

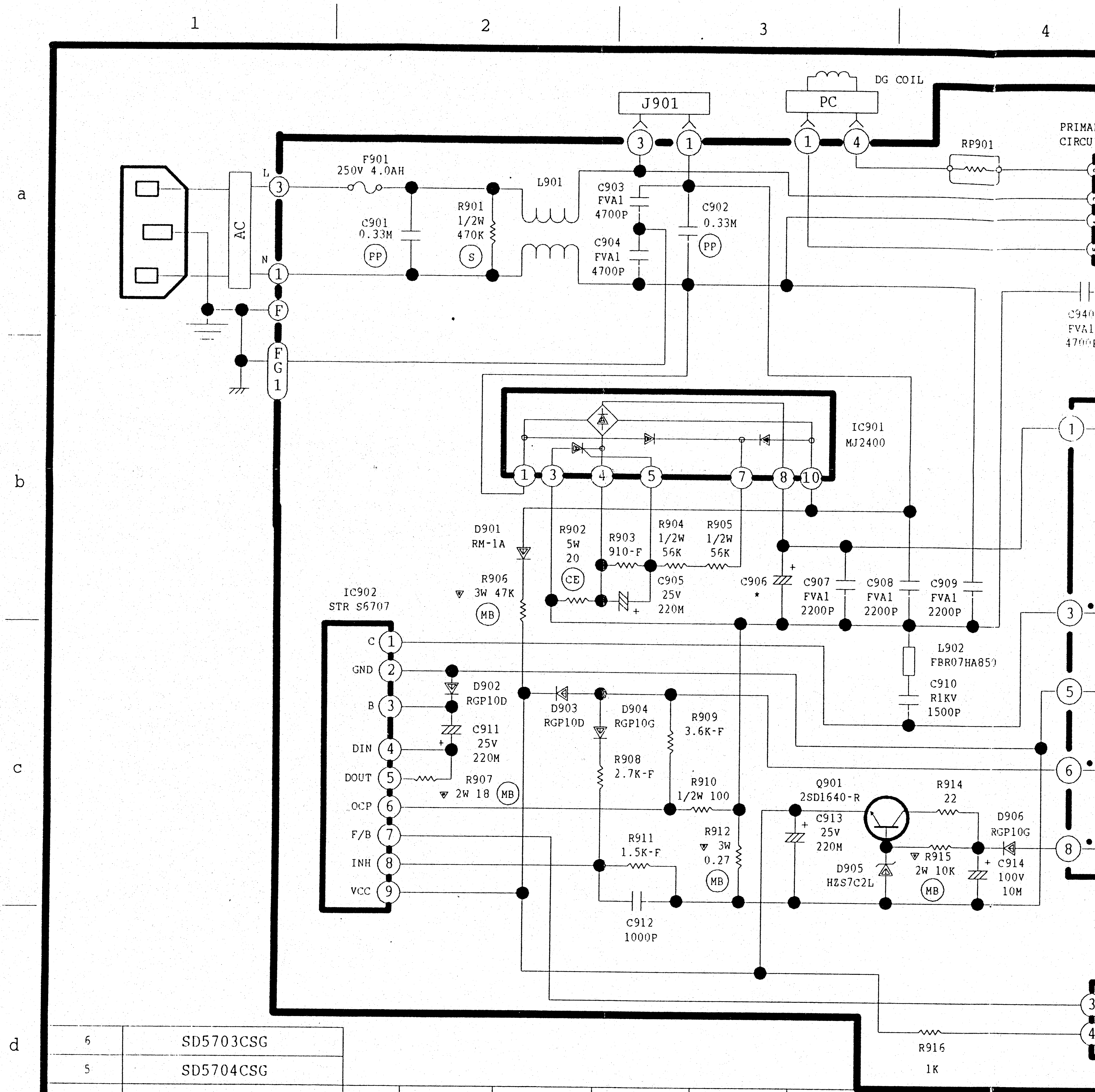
1 2 3 4

e


4
5
6
7
a
b
c
d
COIL
RP901
PRIMARY CIRCUIT
12V
D964 1SS83
RY901
C940 FVA1 4700P
C941 FVA1 4700P
T901
Q958 2SC3311A
R972 10K
5V
R973 4.7K
Q959
R97: 2.7K
(C965)
(R961)
D951 RGP15J L6431
D952 RGP15J L6431
L951 27M
C951 250V 220M
C952 250V 33M
R951 1/2W 150K
DEG
R966 15K-F
190V
F957 125V 1A
R967 11K-F
D953 RGP15J L6431
C953 100V 100M
F953 125V 1.5A
L952 100M
75V
C954 100V 220M
R970 3W 10K
MB
R968 16K-F
C971 500V 4700P
(C972)
R952 3W 3.3
D957 HZ3.0BP
D958 HZ7C2
R953 1/2W 18K
Q953 2SC2240
D959 1SS83
IC951 SE075
Q951 2SB1095
R954 1W 100
C955 500V 100P
Q952 KSC2383 -Y
Q954 2SC3311A
SUSP
R955 6.8K
R956 10K
C909 FVA1 2200P
L902 FBR07HA850
C910 R1KV 1500P
F951 135V 3A
F952 135V 3A
D954 RGP15J L6431
L953 27M
F956 125V 1A
24V
C956 50V 470M
C957 1500P
L954 27M
15V
D955 RU-4Z M1
IC952 L7812ML
F955 0
12V
R914 22
D906 RGP10G
R915 2W 10K
C914 100V 10M
C958 25V 1000M
C959 25V 1000M
C961 25V 470M
C962 1500P
R959 8.2K
F954 251001.5 1.5A
D956 RGP15J L6431
C960 25V 3300M
R957 2W 100
R958 100
D960
IC953 M5278D05
C963 25V 100M
C964 1500P
D970 ST05-16
D961 1SS83
7V
IC903 TLP721F
R916 1K
CONTINUE TO DEFLECTION SCHEMATIC

COMPONENTS MARKED BY ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY.
PRIMARY COMPONENTS ARE SAFETY PART.
DIODE NOT LABEL IS 1S2076A/2471

| SUBISHI ELECTRONICS MFG. S'PORE | | | TITLE OF DRAWING | POWER<br>SCHEMATIC DIAGRAM |
|---|---|---|---|---|
| MM | SCALE : NTS | DATE : 26TH OCT 95 | | |
| CHECKED | DESIGNED | APPROVED | | |
| | | | DRAWING NO. | |


1
2
3
4
a
b
c
d
AC
L
N
F
F G 1
F901
250V 4.0AH
C901
0.33M
PP
R901
1/2W
470K
S
L901
C903
FVA1
4700P
C904
FVA1
4700P
C902
0.33M
PP
J901
PC
DG COIL
RP901
PRIMA
CIRCU
C940
FVA1
4700P
IC901
MJ2400
D901
RM-1A
R906
3W 47K
MB
R902
5W
20
CE
R903
910-F
R904
1/2W
56K
R905
1/2W
56K
C905
25V
220M
C906
*
C907
FVA1
2200P
C908
FVA1
2200P
C909
FVA1
2200P
L902
FBR07HA859
C910
R1KV
1500P
IC902
STR S6707
C
GND
B
DIN
DOUT
OCP
F/B
INH
VCC
D902
RGP10D
C911
25V
220M
R907
2W 18
MB
D903
RGP10D
D904
RGP10G
R909
3.6K-F
R908
2.7K-F
R910
1/2W 100
Q901
2SD1640-R
R914
22
D906
RGP10G
C913
25V
220M
R911
1.5K-F
R912
3W
0.27
MB
D905
HZS7C2L
R915
2W 10K
MB
C914
100V
10M
C912
1000P
R916
1K

| ITEM | MODEL |
|---|---|
| 6 | SD5703CSG |
| 5 | SD5704CSG |
| 4 | SD5704C |
| 3 | SD5700C, 02C, 03C |
| 2 | SD5705C-SD |
| 1 | |

| * | ITEM 1 | ITEM 2 | ITEM 3 | ITEM 4 | ITEM 5 | ITEM 6 |
|---|---|---|---|---|---|---|
| C906 | 250V 560M | 250V 560M | H400V 390M | H400V 390M | H400V 390M | H400V 390M |
| | | | | | | |

e

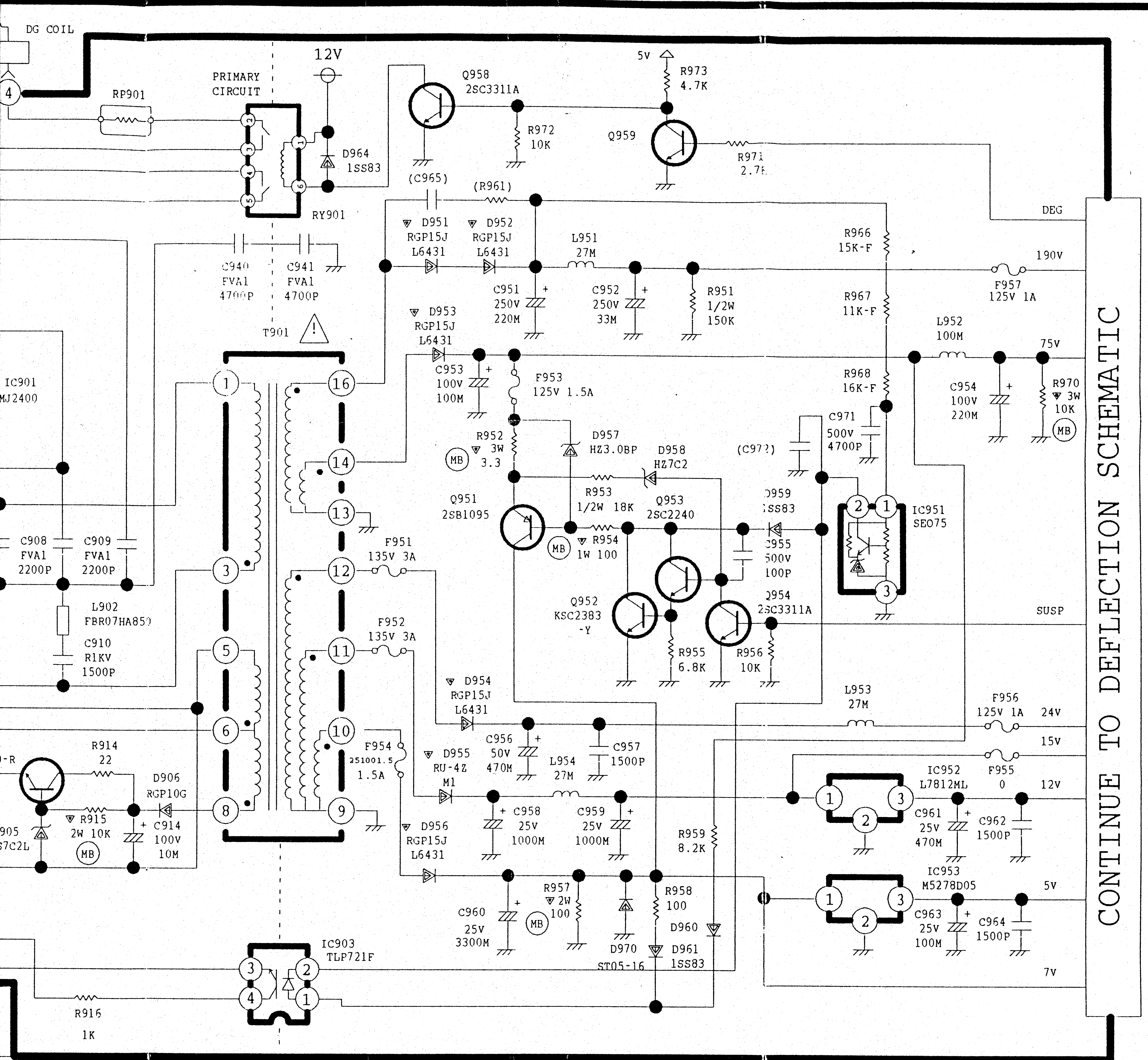
CHANGE

DWG.
ISSUED

MITSUBISHI ELECTR

| DIM IN MM | SCALE : NT |
|---|---|
| DRAWN | CHECKED |

1 2 3 4


DG COIL
4
RP901
PRIMARY CIRCUIT
12V
D964 1SS83
RY901
Q958 2SC3311A
R972 10K
5V
R973 4.7K
Q959
R971 2.7K
(C965)
(R961)
D951 RGP15J L6431
D952 RGP15J L6431
L951 27M
DEG
R966 15K-F
190V
C940 FVA1 4700P
C941 FVA1 4700P
C951 250V 220M
C952 250V 33M
R951 1/2W 150K
F957 125V 1A
R967 11K-F
T901
D953 RGP15J L6431
L952 100M
75V
IC901 MJ2400
C953 100V 100M
F953 125V 1.5A
R968 16K-F
C954 100V 220M
R970 3W 10K
MB
C971 500V 4700P
(C972)
R952 3W 3.3
D957 HZ3.0BP
D958 HZ7C2
R953 1/2W 18K
Q953 2SC2240
D959 1SS83
IC951 SE075
Q951 2SB1095
R954 1W 100
C908 FVA1 2200P
C909 FVA1 2200P
C955 500V 100P
F951 135V 3A
Q952 KSC2383 -Y
Q954 2SC3311A
SUSP
L902 FBR07HA850
C910 R1KV 1500P
F952 135V 3A
R955 6.8K
R956 10K
D954 RGP15J L6431
L953 27M
F956 125V 1A
24V
C956 50V 470M
C957 1500P
15V
R914 22
F954 251001.5 1.5A
D955 RU-4Z M1
L954 27M
IC952 L7812ML
F955 0
12V
D906 RGP10G
R915 2W 10K
C914 100V 10M
C958 25V 1000M
C959 25V 1000M
C961 25V 470M
C962 1500P
D956 RGP15J L6431
R959 8.2K
IC953 M5278D05
5V
R957 2W 100
R958 100
C960 25V 3300M
D960
C963 25V 100M
C964 1500P
IC903 TLP721F
D970 ST05-16
D961 1SS83
7V
R916 1K
CONTINUE TO DEFLECTION SCHEMATIC

| 5 | ITEM 6 |
|---|---|
| 390M | H400V 390M |

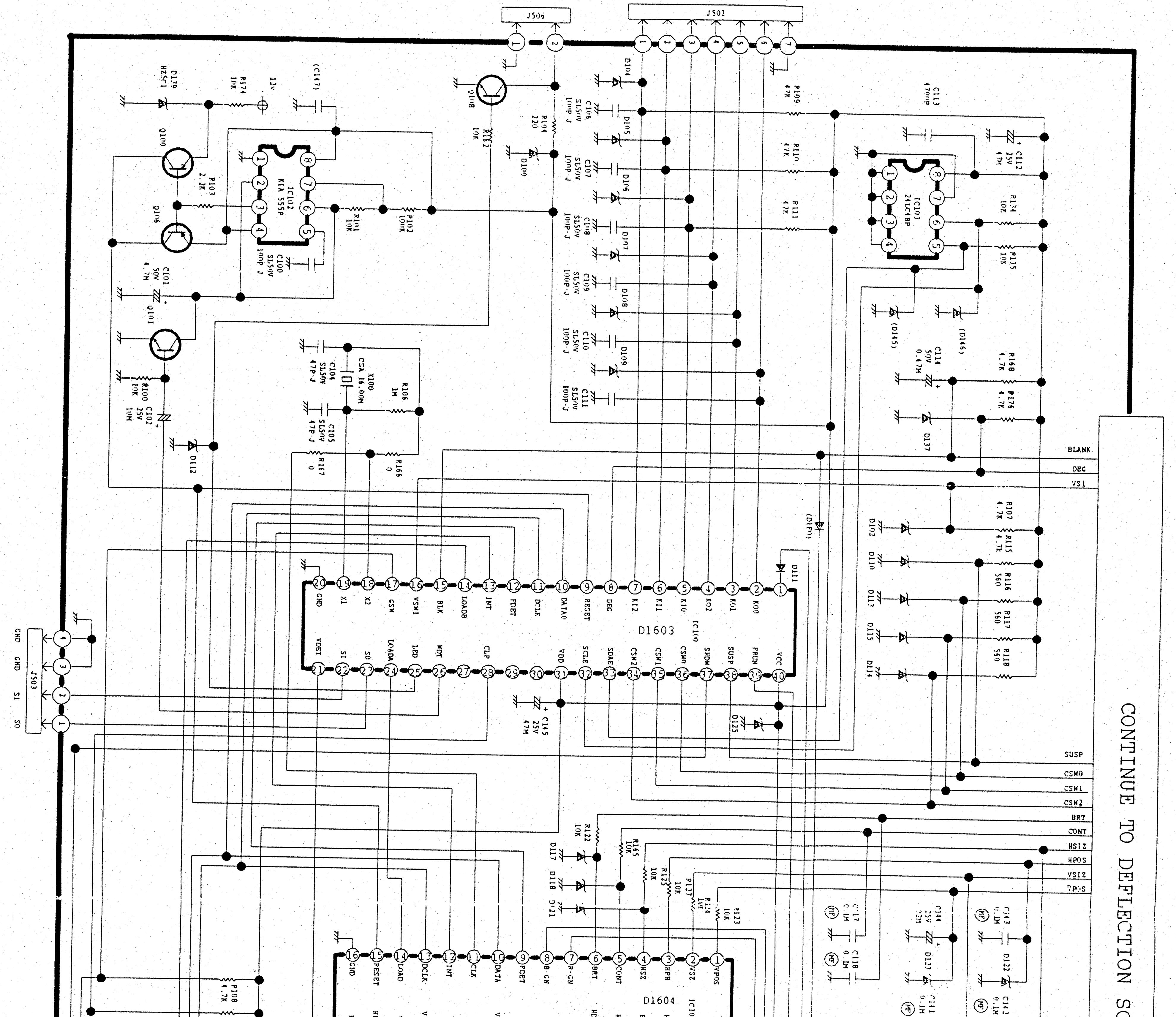
COMPONENTS MARKED BY ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT
TO SAFETY.
PRIMARY COMPONENTS ARE SAFETY PART.
DIODE NOT LABEL IS 1S2076A/2471

MITSUBISHI ELECTRONICS MFG. S'PORE

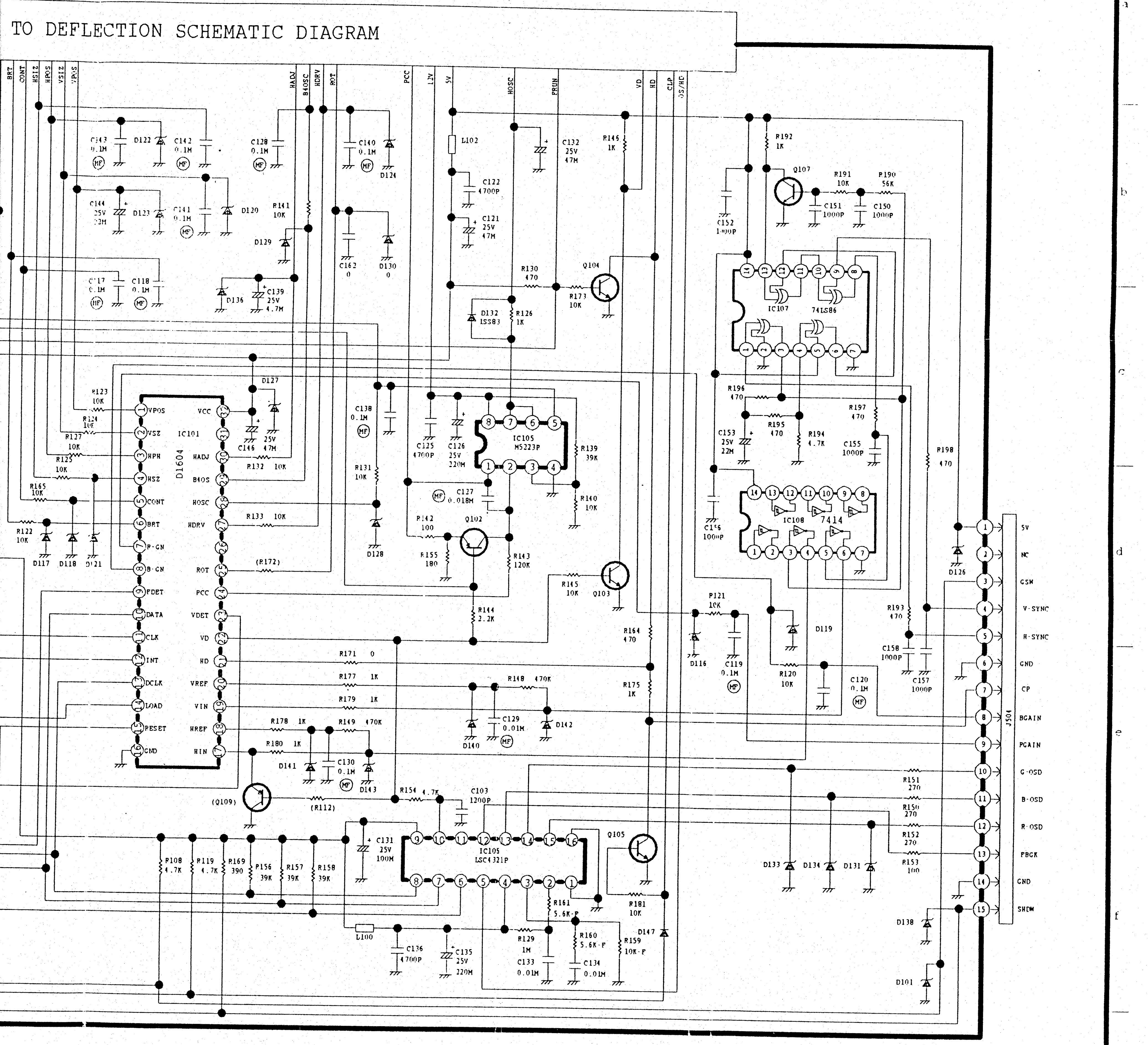
| M IN MM | SCALE : NTS | DATE : 26TH OCT 95 | TITLE OF DRAWING | POWER SCHEMATIC DIAGRAM |
|---|---|---|---|---|
| DRAWN | CHECKED | DESIGNED | APPROVED | |
| | | | DRAWING NO. | |

CHANGE

| ITEM | MODEL |
|---|---|
| 1 | SD5707C/C-FA |
| 2 | SD5705C-SD |
| 3 | SD5700C, 02, 03C |
| 4 | SD5704C |



J506
J502
J503
IC102 KIA 555P
IC103 24C16BP
IC101 D1603
D1604
Q100
Q101
Q106
Q108
X100 CSA 16.00M
BLANK
DEG
VS1
SUSP
CSM0
CSM1
CSM2
BRT
CONT
HSIZ
HPOS
VSIZ
VPOS
GND
SI
SO
CONTINUE TO DEFLECTION SC


TO DEFLECTION SCHEMATIC DIAGRAM
BRT
CONT
HSIZ
HPOS
VSIZ
VPOS
HADJ
B4OSC
HDRV
ROT
PCC
12V
5V
HOSC
PRUN
VD
HD
CLP
OS/HD
C143 0.1M
D122
C142 0.1M
C128 0.1M
C140 0.1M
D124
C144 25V 22M
D123
C141 0.1M
D120
R141 10K
D129
C162 0
D130 0
C117 0.1M
C118 0.1M
D136
C139 25V 4.7M
L102
C122 4700P
C121 25V 47M
C132 25V 47M
R146 1K
R130 470
Q104
R173 10K
D132 1SS83
R126 1K
R192 1K
Q107
R191 10K
R190 56K
C151 1000P
C150 1000P
C152 1000P
IC107
74LS86
D127
R123 10K
R124 10K
R127 10K
R125 10K
R165 10K
R122 10K
D117
D118
D121
VPOS
VSZ
HPH
HSZ
CONT
BRT
P-GN
B-GN
PDET
DATA
CLK
INT
DCLK
LOAD
RESET
GND
VCC
HADJ
B4OS
HOSC
HDRV
ROT
PCC
VDET
VD
HD
VREF
VIN
HREF
RIN
IC101
D1604
C146 25V 47M
R132 10K
R133 10K
(R172)
C138 0.1M
R131 10K
D128
C125 4700P
C126 25V 220M
IC105
M5223P
R139 39K
R140 10K
C127 0.018M
R142 100
Q102
R155 180
R143 120K
R144 2.2K
R145 10K
Q103
R196 470
R195 470
R194 4.7K
C153 25V 22M
R197 470
C155 1000P
R198 470
C156 1000P
IC108
7414
D126
R121 10K
D119
D116
C119 0.1M
R120 10K
C120 0.1M
R193 470
C158 1000P
C157 1000P
R164 470
R175 1K
R171 0
R177 1K
R179 1K
R148 470K
C129 0.01M
D140
D142
R178 1K
R149 470K
R180 1K
D141
C130 0.1M
D143
(Q109)
(R112)
R154 4.7K
C103 1200P
C131 25V 100M
IC105
LSC4321P
Q105
R181 10K
D147
R159 10K-F
R161 5.6K-F
R160 5.6K-F
R129 1M
C133 0.01M
C134 0.01M
L100
C136 4700P
C135 25V 220M
R108 4.7K
R119 4.7K
R169 390
R156 39K
R157 39K
R158 39K
D133
D134
D131
R151 270
R150 270
R152 270
R153 100
D138
D101
MF
J504
5V
NC
GSW
V-SYNC
H-SYNC
GND
CP
BGAIN
PGAIN
G-OSD
B-OSD
R-OSD
FBCK
GND
SHDW

DIODE NOT LABEL IS 1S2076A / 1S2471
ZENER DIODE NOT LABEL IS HZS7C1L
CAPACITOR NOT LABEL IS B50V 0.01MF-K
BEAD FERRITE NOT LABEL IS FBP07HA850
TRANSISTOR (NPN) 2SC3311A
(PNP) 2SA1207S

| DWG. ISSUED | MITSUBISHI ELECTRONICS MFG. S'PORE | | | | TITLE OF DRAWING | CONTROL<br>SCHEMATIC DIAGRAM |
|---|---|---|---|---|---|---|
| | DIM IN MM | SCALE : NTS | DATE : 26TH OCT 95 | | | |
| | DRAWN | CHECKED | DESIGNED | APPROVED | DRAWING NO. | |

COMPONENTS MARKED BY ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY.

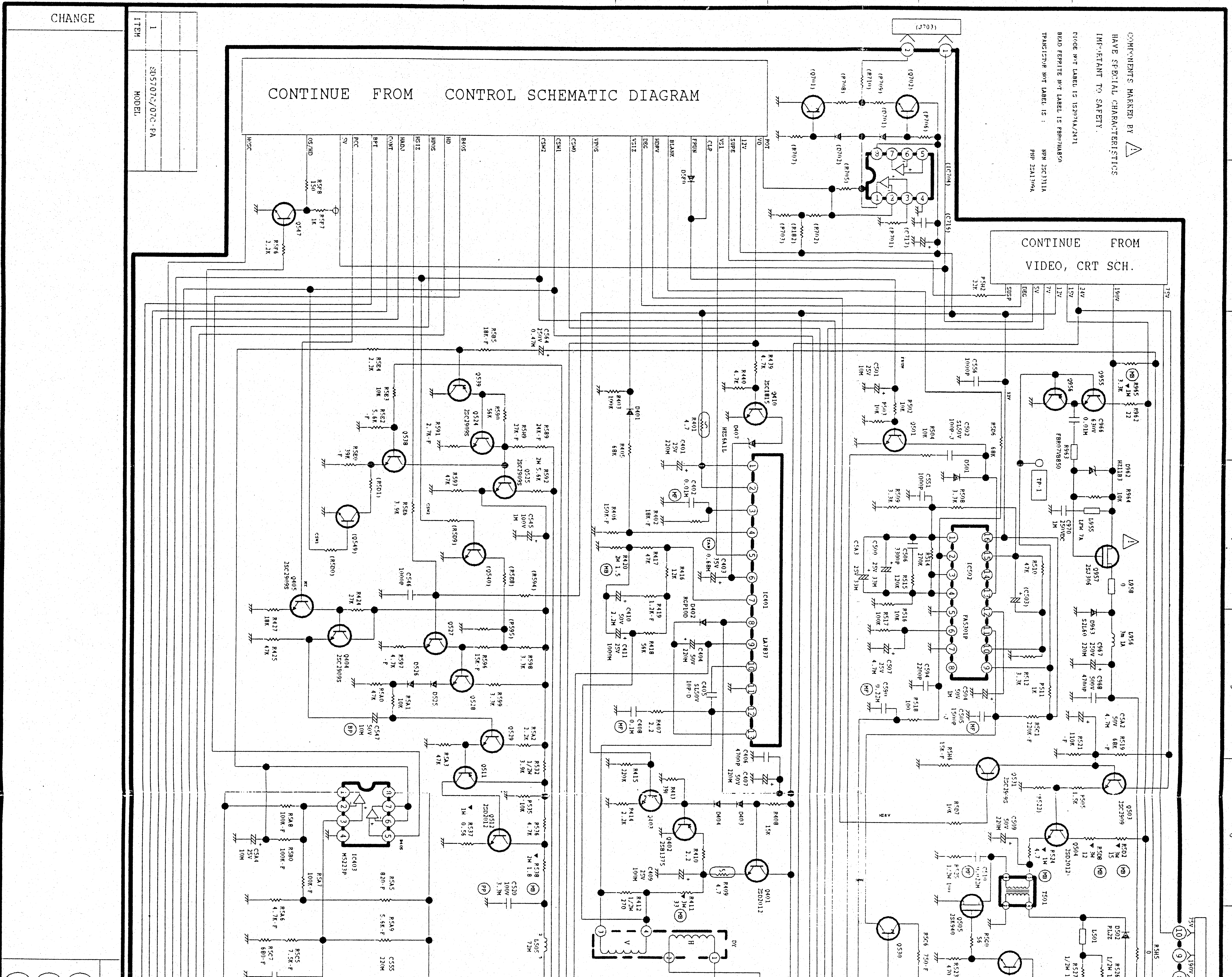
DIODE NOT LABEL IS 1S2076A/2471

BEAD FERRITE NOT LABEL IS FBR07HAB50

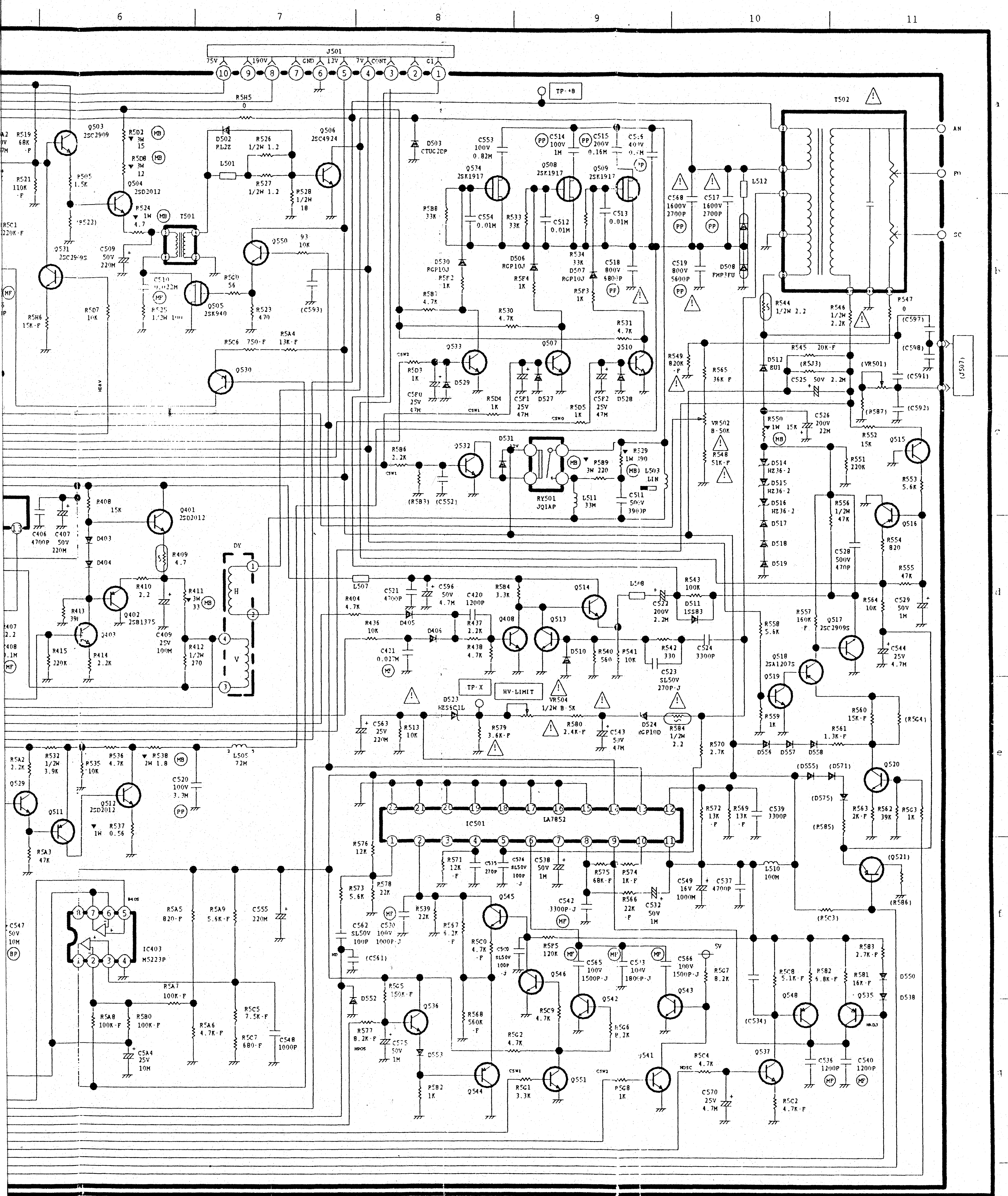
TRANSISTOR NOT LABEL IS : NPN 2SC1311A

PNP 2SA1309A

| CHANGE | ITEM | MODEL |
|---|---|---|
| | 1 | SD5707C/07C-FA |



CONTINUE FROM CONTROL SCHEMATIC DIAGRAM
CONTINUE FROM VIDEO, CRT SCH.
(J703)
(IC704)
IC401 LA7837
IC502 FA5301P
IC403 M5223P
Q401 2SD2012
Q402 2SB1375
Q403
Q404 2SC2909S
Q405 2SC2909S
Q410 2SC1815
Q501
Q503 2SC2909
Q504 2SD2012
Q505 2SK940
Q511 2SC2909S
Q512 2SD2012
Q524 2SC2909S
Q525 2SC2909S
Q527
Q528
Q529
Q530
Q538
Q539
Q547
Q955
Q956
Q957 2SJ306
T501
DY
V
H
TP-1
HSYC
OS/HD
5V
PCC
BPT
CONT
HADJ
HSIZ
HPOS
HD
B405
CSM2
CSM1
CSM0
VPOS
VSIZ
DEG
HORV
BLANK
PRUN
CLP
VSI
SUPE
12V
VO
POT
SUSP
DEG
5V
7V
12V
15V
24V
190V
75V


6
7
8
9
10
11
J501
75V
190V
GND
13V
7V
CONT
G1
TP-4B
T502
AN
PN
SC
Q503 2SC2909
Q504 2SD2012
Q506 2SC4924
Q531 2SC2909S
T501
Q505 2SK940
Q550
Q530
D502 RL2Z
L501
D503 CTUC2DP
Q534 2SK1917
Q508 2SK1917
Q509 2SK1917
D508 FMP3FU
L512
Q533
Q507
Q510
Q532
D531
RY501 JQ1AP
L503 LIN
L511 33M
VR502 B-50K
VR501
(J507)
D512 EU1
D514 HZ36-2
D515 HZ36-2
D516 HZ36-2
D517
D518
D519
Q515
Q516
Q517 2SC2909S
Q518 2SA1207S
Q519
Q520
(Q521)
Q401 2SD2012
Q402 2SB1375
Q403
D403
D404
DY
H
V
L507
Q514
Q408
Q513
D510
L508
D511 1SS83
TP-X
HV-LIMIT
D523 HZS6C1L
VR504 1/2W B 5K
D524 RGP10D
D556
D557
D558
Q529
Q511
Q512 2SD2012
L505 72M
IC501
LA7852
L510 100M
IC403 M5223P
Q545
Q546
Q542
Q543
Q536
Q544
Q551
Q541
Q537
Q548
Q535
D550
D538
D552
D553
5V

DWG. ISSUED

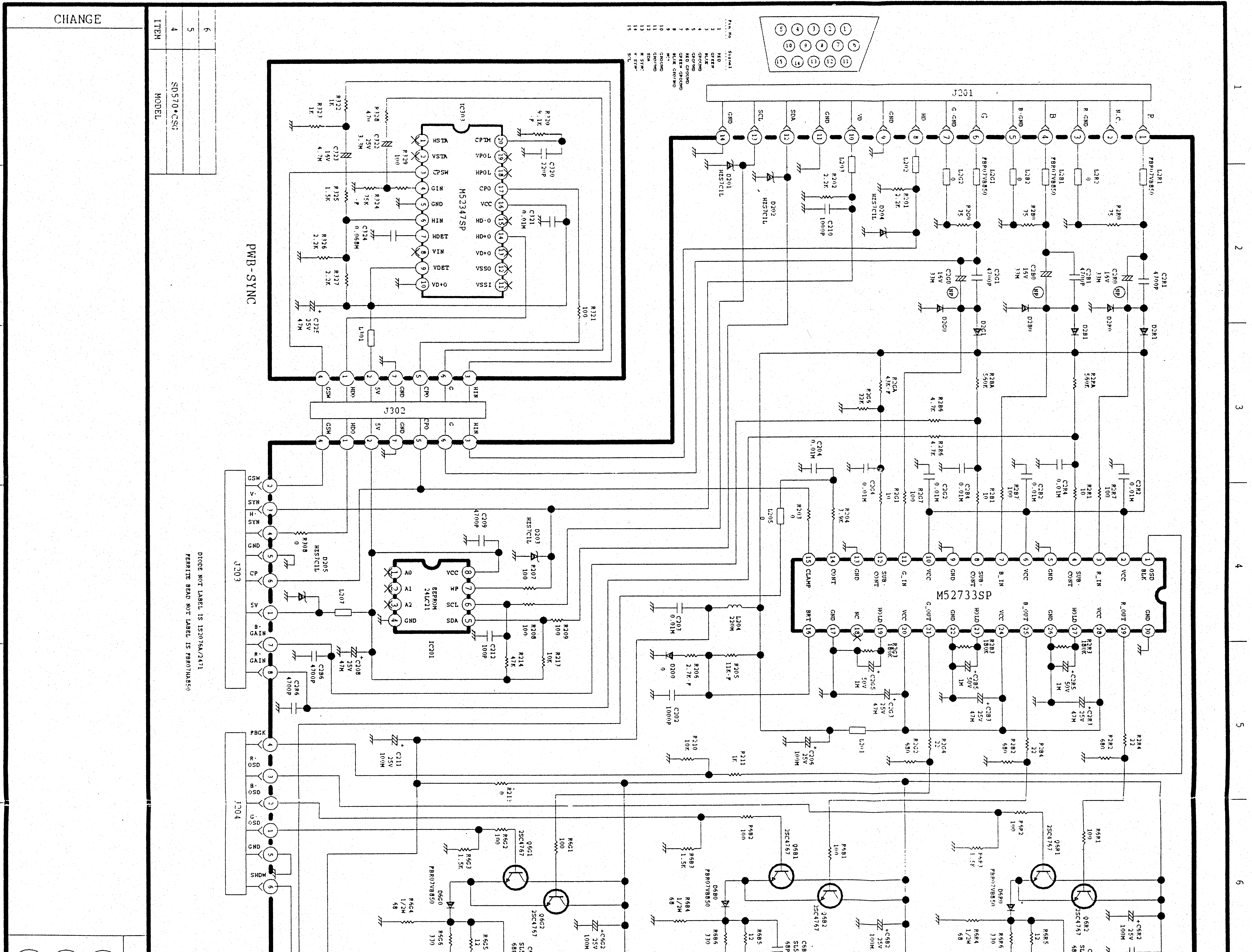
MITSUBISHI ELECTRONICS MFG. S'PORE

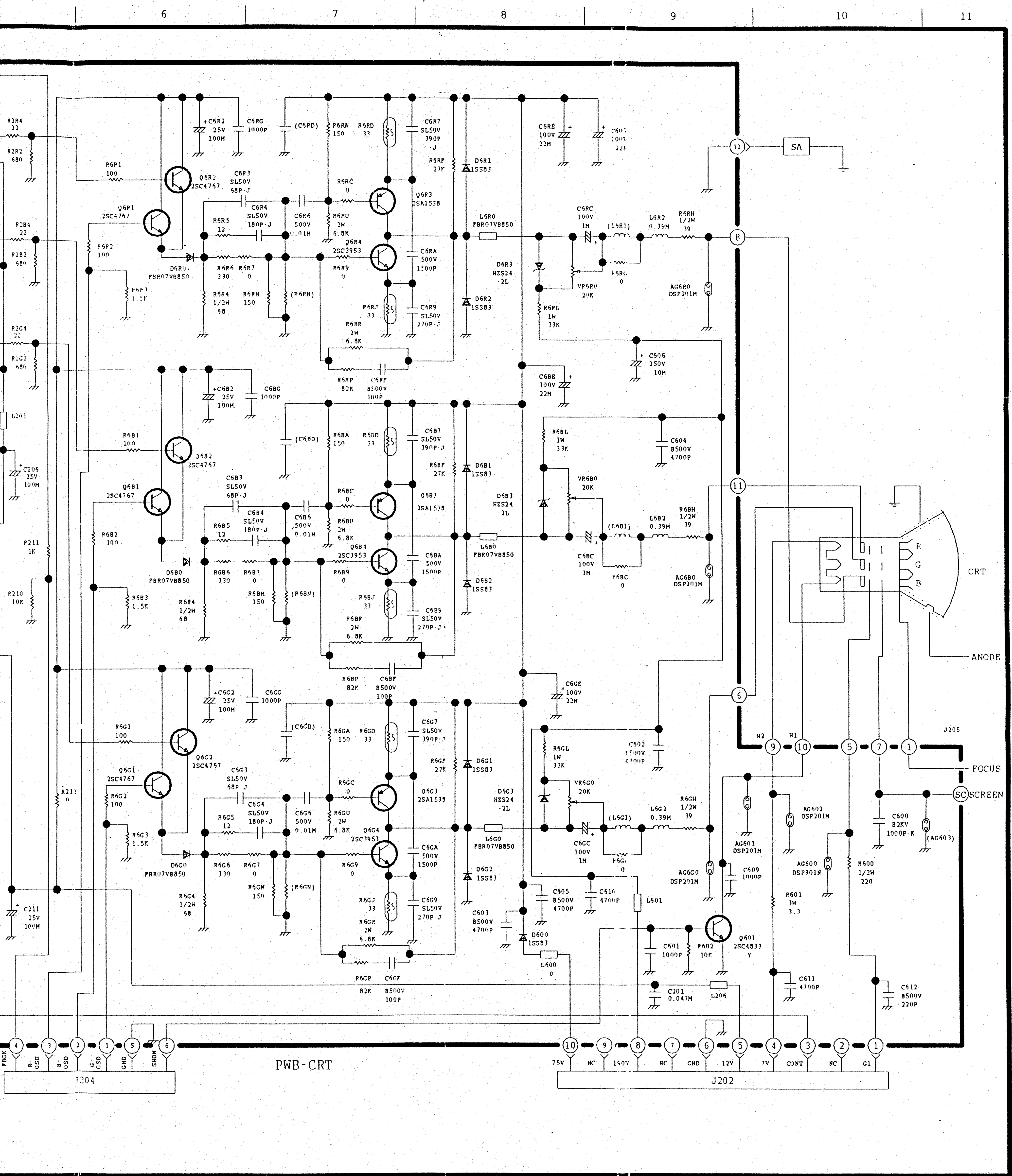
| DIM IN MM | SCALE : NTS | DATE: 26TH OCT 1995 | |
|---|---|---|---|
| DRAWN | CHECKED | DESIGNED | APPROVED |

TITLE OF DRAWING

# DEFLECTION SCHEMATIC DIAGRAM

DRAWING NO.


CHANGE
ITEM
MODEL
SD570*CSG
PWB-SYNC
IC301
M52347SP
HSTA
VSTA
CPSW
GIN
GND
HIN
HDET
VIN
VDET
VD+O
CPTM
VPOL
HPOL
CPO
VCC
HD-O
HD+O
VD+O
VSSO
VSSI
J302
GSW
HDO
5V
GND
CPO
G
HIN
J303
V-SYN
H-SYN
CP
B-GAIN
R-GAIN
J304
FBGK
R-OSD
B-OSD
G-OSD
SHDW
IC201
EEPROM
24C21
A0
A1
A2
VCC
WP
SCL
SDA
J201
GND
SCL
SDA
VD
HD
G GND
B GND
R GND
N.C.
R
M52733SP
CLAMP
CONT
SUB-CONT
G_IN
B_IN
R_IN
OSD BLK
BRT
NC
HOLD
G_OUT
B_OUT
R_OUT
2SC4767
FBR07VB850
DIODE NOT LABEL IS 1S2076A/2471
FERRITE BEAD NOT LABEL IS FBR07HA850


6
7
8
9
10
11
a
b
c
d
e
f
g
PWB-CRT
J204
PBGK
R-OSD
B-OSD
G-OSD
GND
SHDW
J202
75V
NC
190V
NC
GND
12V
7V
CONT
NC
G1
J205
H2
H1
FOCUS
SCREEN
ANODE
CRT
R
G
B
SA
Q6R1 2SC4767
Q6R2 2SC4767
Q6R3 2SA1538
Q6R4 2SC3953
Q6B1 2SC4767
Q6B2 2SC4767
Q6B3 2SA1538
Q6B4 2SC3953
Q6G1 2SC4767
Q6G2 2SC4767
Q6G3 2SA1538
Q6G4 2SC3953
Q601 2SC4833 -Y
D6R0 FBR07VB850
D6B0 FBR07VB850
D6G0 FBR07VB850
D6R1 1SS83
D6R2 1SS83
D6B1 1SS83
D6B2 1SS83
D6G1 1SS83
D6G2 1SS83
D600 1SS83
D6R3 HZS24 -2L
D6B3 HZS24 -2L
D6G3 HZS24 -2L
L5R0 FBR07VB850
L5B0 FBR07VB850
L6G0 FBR07VB850
L6R2 0.39M
L6B2 0.39M
L6G2 0.39M
(L6R1)
(L6B1)
(L6G1)
L601
L600 0
L201
L206
VR6R0 20K
VR6B0 20K
VR6G0 20K
AG6R0 DSP201M
AG6B0 DSP201M
AG6G0 DSP201M
AG601 DSP201M
AG602 DSP201M
AG600 DSP301M
(AG603)
C6R2 25V 100M
C6RG 1000P
C6R3 SL50V 68P-J
C6R4 SL50V 180P-J
C6R6 500V 0.01M
C6R7 SL50V 390P -J
C6RA 500V 1500P
C6R9 SL50V 270P-J
C6RF B500V 100P
C6RE 100V 22M
C6RC 100V 1M
(C6RD)
C6B2 25V 100M
C6BG 1000P
C6B3 SL50V 68P-J
C6B4 SL50V 180P-J
C6B6 500V 0.01M
C6B7 SL50V 390P-J
C6BA 500V 1500P
C6B9 SL50V 270P-J
C6BF B500V 100P
C6BE 100V 22M
C6BC 100V 1M
(C6BD)
C6G2 25V 100M
C6GG 1000P
C6G3 SL50V 68P-J
C6G4 SL50V 180P-J
C6G6 500V 0.01M
C6G7 SL50V 390P-J
C6GA 500V 1500P
C6G9 SL50V 270P-J
C6GF B500V 100P
C6GE 100V 22M
C6GC 100V 1M
(C6GD)
C606 250V 10M
C604 B500V 4700P
C602 B500V 4700P
C603 B500V 4700P
C605 B500V 4700P
C616 4700P
C601 1000P
C609 1000P
C201 0.047M
C611 4700P
C612 B500V 220P
C600 B2KV 1000P-K
C206 25V 100M
C211 25V 100M
R6R1 100
R6R2 100
R6R3 1.5K
R6R4 1/2W 68
R6R5 12
R6R6 330
R6R7 0
R6RM 150
(R6RN)
R6R9 0
R6RA 150
R6RD 33
R6RC 0
R6RU 2W 6.8K
R6RF 27K
R6RJ 33
R6RR 2W 6.8K
R6RP 82K
R6RL 1W 33K
R6RG 0
R6RH 1/2W 39
R6B1 100
R6B2 100
R6B3 1.5K
R6B4 1/2W 68
R6B5 12
R6B6 330
R6B7 0
R6BM 150
(R6BN)
R6B9 0
R6BA 150
R6BD 33
R6BC 0
R6BU 2W 6.8K
R6BF 27K
R6BJ 33
R6BR 2W 6.8K
R6BP 82K
R6BL 1W 33K
R6BC 0
R6BH 1/2W 39
R6G1 100
R6G2 100
R6G3 1.5K
R6G4 1/2W 68
R6G5 12
R6G6 330
R6G7 0
R6GM 150
(R6GN)
R6G9 0
R6GA 150
R6GD 33
R6GC 0
R6GU 2W 6.8K
R6GF 27K
R6GJ 33
R6GR 2W 6.8K
R6GP 82K
R6GL 1W 33K
R6G- 0
R6GH 1/2W 39
R602 10K
R601 3W 3.3
R600 1/2W 220
R2R4 22
R2R2 680
R2B4 22
R2B2 680
R2G4 22
R2G2 680
R211 1K
R210 10K
R21- 0

| DWG. ISSUED | MITSUBISHI ELECTRONICS MFG. S'PORE | | | | TITLE OF DRAWING | SYNC ON GREEN, VIDEO SET<br>SCHEMATIC DIAGRAM |
|---|---|---|---|---|---|---|
| | DIM IN MM | SCALE : NTS | DATE : 26TH OCT 95 | | | |
| | DRAWN | CHECKED | DESIGNED | APPROVED | DRAWING NO. | |

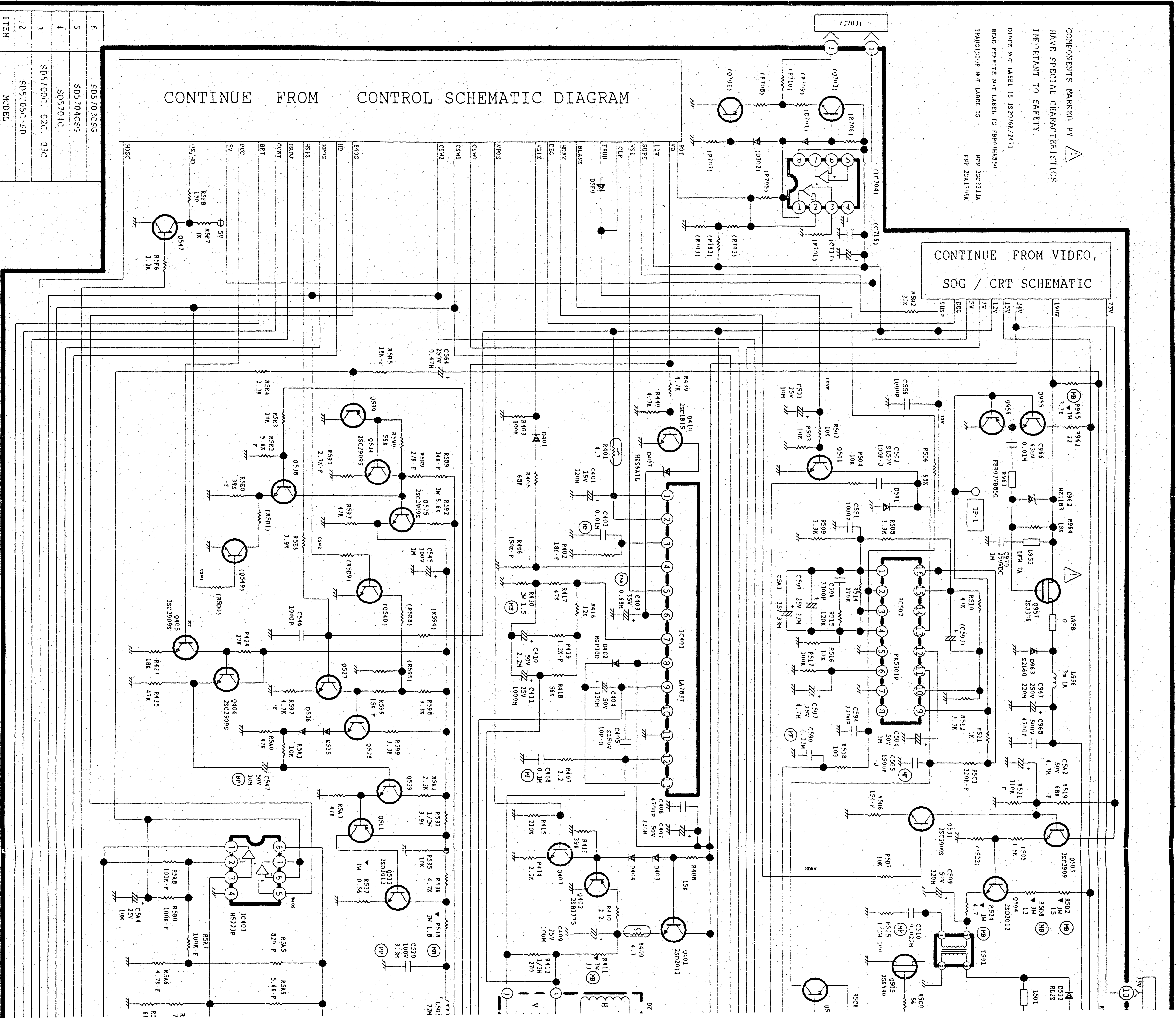
CHANGE

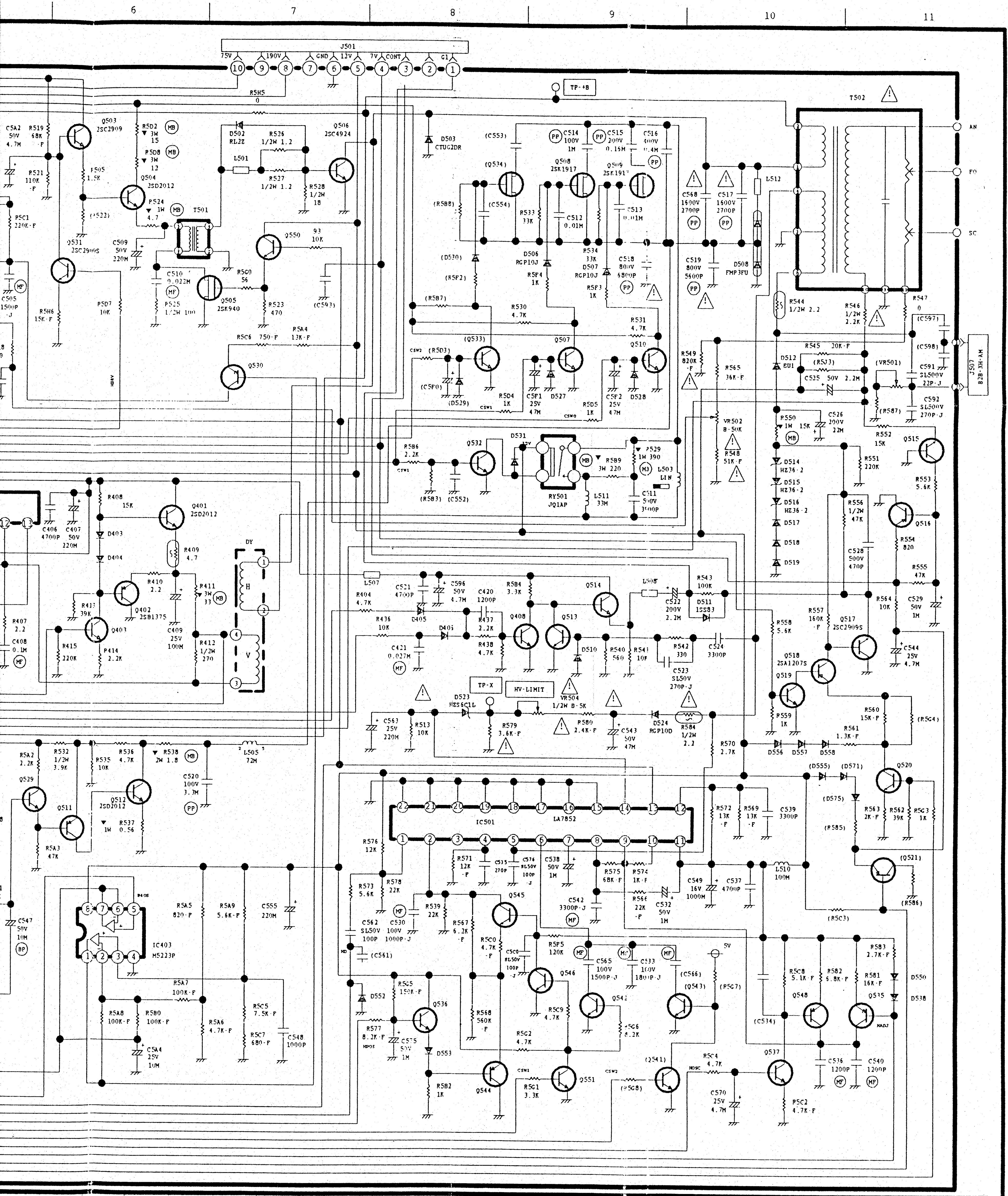
| ITEM | MODEL |
|---|---|
| 1 | SD5705C-SD |
| 2 | SD5700C, 02C, 03C |
| 3 | SD5704C |
| 4 | SD5704CSG |
| 5 | SD5703CSG |
| 6 |  |

| LOC | ITEM 1 | ITEM 2 | ITEM 3 | ITEM 4 | ITEM 5 | ITEM 6 |
|---|---|---|---|---|---|---|
| C591 | NIL | NIL | NIL | NIL | SL500V<br>22P-J | SL500V<br>22P-J |
| C592 | NIL | NIL | NIL | NIL | SL500V<br>270P-J | SL500V<br>270P-J |
| J507 | NIL | NIL | NIL | NIL | B2B-XH<br>-AM | B2B-XH<br>-AM |

COMPONENTS MARKED BY ⚠
HAVE SPECIAL CHARACTERISTICS
IMPORTANT TO SAFETY.

DIODE P/T LABEL IS 1S2076A/2471
BEAD FERRITE P/T LABEL IS FBP07HA850
TRANSISTOR P/T LABEL IS : NPN 2SC3311A
PNP 2SA1309A


CONTINUE FROM CONTROL SCHEMATIC DIAGRAM
CONTINUE FROM VIDEO, SOG / CRT SCHEMATIC
(J703)
(IC704)
IC401 LA7837
IC502 FA5301P
IC403 M5223P
TP-1
HDSC
OS/HD
5V
PCC
BRT
CONT
HADJ
HSIZ
HPOS
HD
B40S
CSW2
CSW1
CSW0
VPOS
VSIZ
DEG
HDPY
BLANK
FRUN
CLP
SUPE
12V
VD
ROT
SUSP
24V
19HV
75V
Q547
Q539
Q534 2SC2909S
Q538
Q535 2SC2909S
(Q549)
Q405 2SC2909S
Q404 2SC2909S
(Q540)
Q537
Q528
Q529
Q511
Q512 2SD2012
Q410 2SC1815
Q403
Q402 2SB1375
Q401 2SD2012
Q501
Q955
Q956
Q957 2SJ306
Q531 2SC2909S
Q503 2SC2909
Q504 2SD2012
Q505 2SK940
T591


6
7
8
9
10
11
a
b
c
d
e
f
g
h
J501
75V
190V
GND
12V
7V
CONT
G1
TP-+B
T502
AN
FO
SC
Q503 2SC2909
Q504 2SD2012
Q531 2SC2909S
Q506 2SC4924
Q550
Q505 2SK940
Q530
T501
D502 RL2Z
L501
R536 1/2W 1.2
R527 1/2W 1.2
R528 1/2W 18
D503 CTUG2DR
Q534
Q508 2SK1917
Q509 2SK1917
C514 100V 1M
C515 200V 0.15M
C516 400V 0.4M
C568 1600V 2700P
C517 1600V 2700P
L512
C519 800V 5600P
D508 FMP3FU
C518 800V 6800P
D506 RCP10J
D507 RCP10J
Q533
Q507
Q510
R544 1/2W 2.2
R546 1/2W 2.2K
R547 0
C597
C598
C591 SL500V 22P-J
C592 SL500V 270P-J
J507 B2B-XH-AM
VR501
VR502 B-50K
D512 EU1
C525 50V 2.2M
C526 200V 22M
D514 HZ36-2
D515 HZ36-2
D516 HZ36-2
D517
D518
D519
Q515
Q516
Q517 2SC2909S
Q518 2SA1207S
Q519
Q532
D531
RY501 JQ1AP
L503 L1N
L511 33M
C511 50V 3300P
Q401 2SD2012
Q402 2SB1375
Q403
R409 4.7
R411 3W 33
DY
H
V
Q408
Q513
Q514
D523 HZS6C1L
TP-X
HV-LIMIT
VR504 1/2W B-5K
D524 RCP10D
R584 1/2W 2.2
Q529
Q511
Q512 2SD2012
L505 72M
C520 100V 3.3M
IC403 M5223P
IC501 LA7852
Q545
Q546
Q536
Q544
Q551
Q541
Q543
Q537
Q548
Q515
Q520
Q521
L510 100M
D550
D538
D552
D553
D555
D556
D557
D558
D571
D575
5V
MB
MF
PP
BP

| ITEM 2 | ITEM 3 | ITEM 4 | ITEM 5 | ITEM 6 |
|---|---|---|---|---|
| NIL | NIL | NIL | SL500V 22P-J | SL500V 22P-J |
| NIL | NIL | NIL | SL500V 270P-J | SL500V 270P-J |
| NIL | NIL | NIL | B2B-XH-AM | B2B-XH-AM |

DWG. ISSUED

MITSUBISHI ELECTRONICS MFG. S'PORE

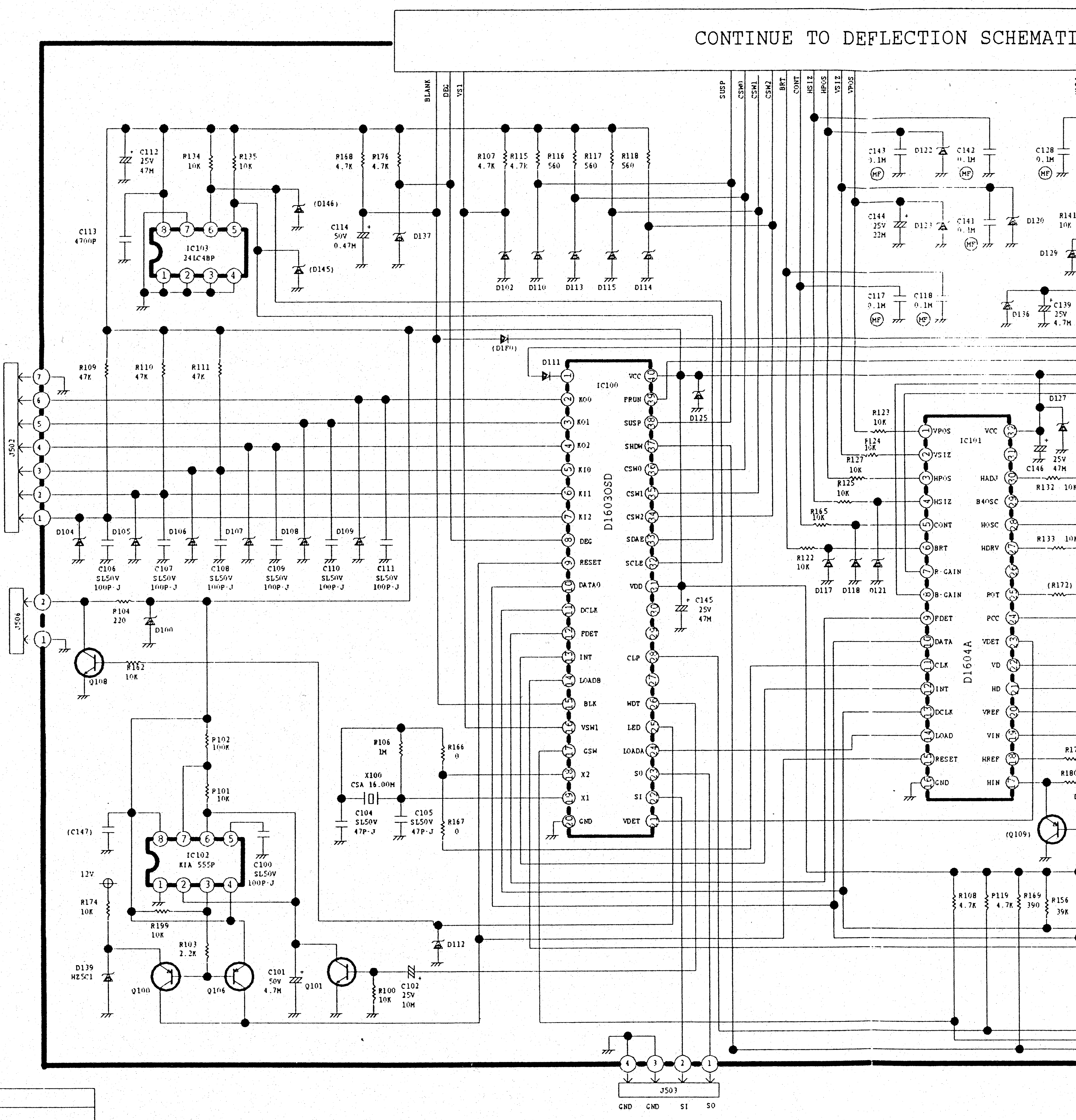
| DIM IN MM | SCALE : NTS | DATE: 25TH OCT 1995 |
|---|---|---|

| DRAWN | CHECKED | DESIGNED | APPROVED |
|---|---|---|---|
| | | | |

TITLE OF DRAWING

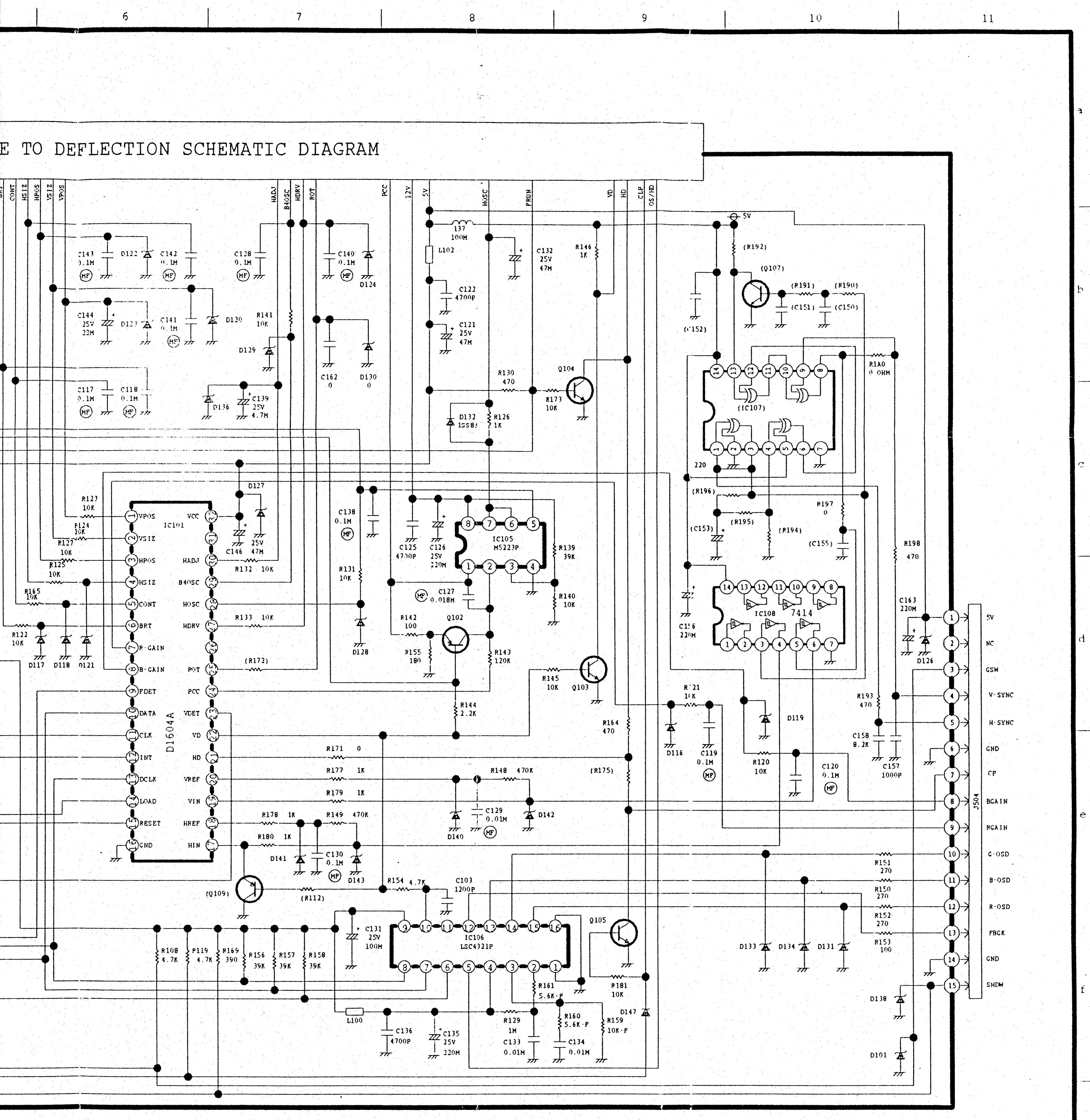
# DEFLECTION SCHEMATIC DIAGRAM

DRAWING NO.


CONTINUE TO DEFLECTION SCHEMATI
BLANK
DEG
VS1
SUSP
CSW0
CSW1
CSW2
BRT
CONT
HSIZ
HPOS
VSIZ
VPOS
IC100
D1603OSD
IC101
D1604A
IC102
KIA 555P
IC103
24LC48P
J502
J506
J503
GND
GND
SI
SO
Q100
Q101
Q106
Q108
(Q109)
X100
CSA 16.00M
12V
D139
HZ5C1
K00
K01
K02
K10
K11
K12
DEG
RESET
DATA0
DCLK
FDET
INT
LOADB
BLK
VSW1
GSW
X2
X1
GND
VCC
PRUN
SUSP
SHDW
CSW0
CSW1
CSW2
SDAE
SCLE
VDD
CLP
WDT
LED
LOADA
SO
SI
VDET
VPOS
VSIZ
HPOS
HSIZ
CONT
BRT
P-GAIN
B-GAIN
FDET
DATA
CLK
INT
DCLK
LOAD
RESET
GND
HADJ
B4OSC
HOSC
HDRV
POT
PCC
VD
HD
VREF
VIN
HREF
HIN
C112 25V 47M
C113 4700P
C114 50V 0.47M
R134 10K
R135 10K
R168 4.7K
R176 4.7K
R107 4.7K
R115 4.7K
R116 560
R117 560
R118 560
D102
D110
D113
D115
D114
(D146)
(D145)
D137
(D1F0)
D111
D125
R109 47K
R110 47K
R111 47K
D104
D105
D106
D107
D108
D109
C106 SL50V 100P-J
C107 SL50V 100P-J
C108 SL50V 100P-J
C109 SL50V 100P-J
C110 SL50V 100P-J
C111 SL50V 100P-J
R104 220
D100
R162 10K
R102 100K
R101 10K
(C147)
C100 SL50V 100P-J
R174 10K
R199 10K
R103 2.2K
C101 50V 4.7M
R100 10K
C102 25V 10M
D112
R106 1M
C104 SL50V 47P-J
C105 SL50V 47P-J
R166 0
R167 0
C145 25V 47M
C143 0.1M
D122
C142 0.1M
C128 0.1M
C144 25V 22M
D123
C141 0.1M
D120
R141 10K
D129
C117 0.1M
C118 0.1M
D136
C139 25V 4.7M
MF
R123 10K
R124 10K
R127 10K
R125 10K
R165 10K
R122 10K
D117
D118
D121
D127
C146 47M
R132 10K
R133 10K
(R172)
R108 4.7K
R119 4.7K
R169 390
R156 39K

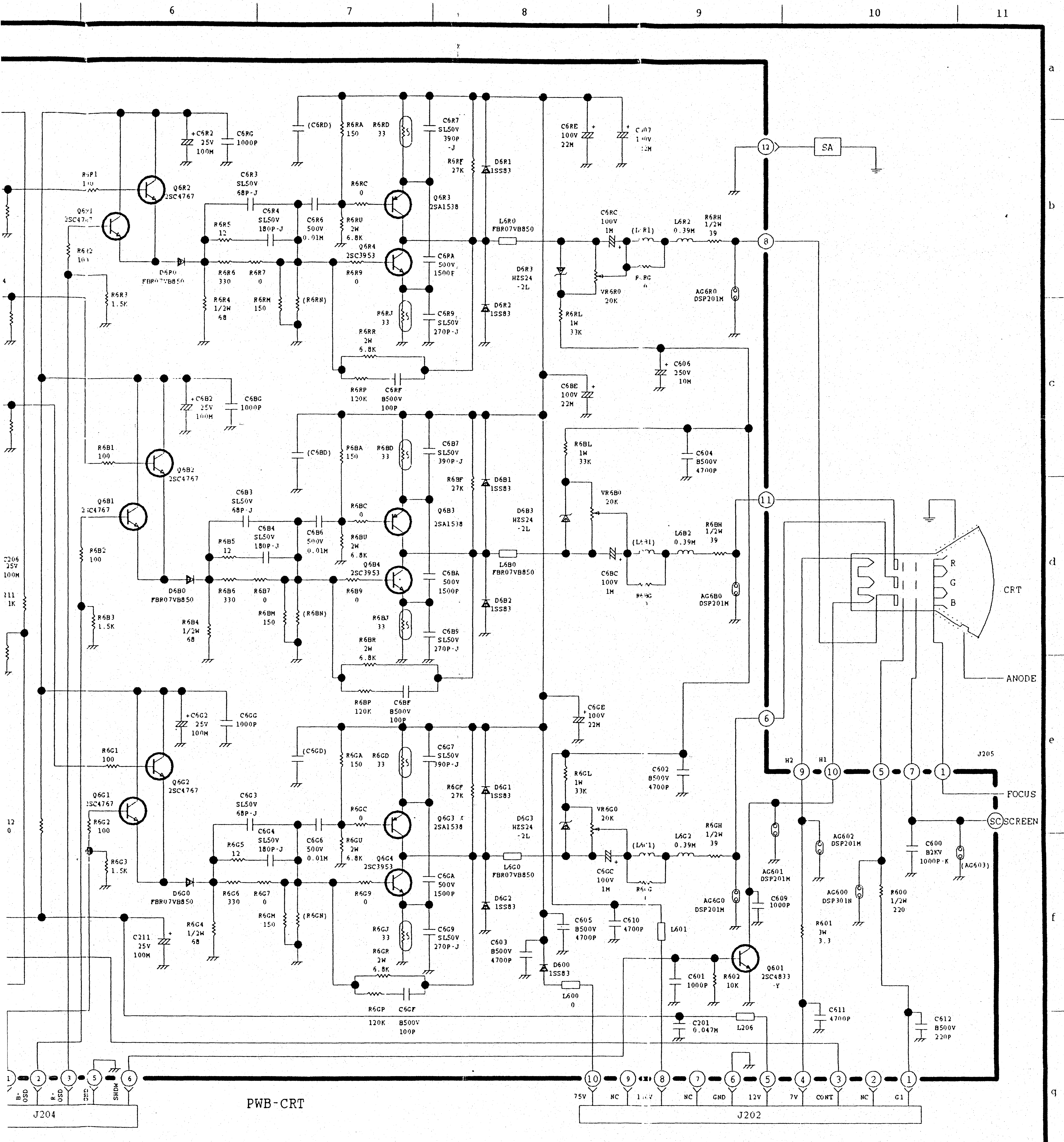
| ITEM | MODEL |
|---|---|
| 8 | |
| 7 | |
| 6 | SD5703CSG |
| 5 | SD5704CSG |
| 4 | |
| 3 | |
| 2 | |
| 1 | |

CHANGE


E TO DEFLECTION SCHEMATIC DIAGRAM
CONT
HSIZ
HPOS
VSIZ
VPOS
HADJ
B40SC
HDRV
ROT
PCC
12V
5V
HOSC
PRUN
VD
HD
CLP
OS/HD
D1604A
IC101
VPOS
VSIZ
HPOS
HSIZ
CONT
BRT
R-GAIN
B-GAIN
FDET
DATA
CLK
INT
DCLK
LOAD
RESET
GND
VCC
HADJ
B40SC
HOSC
HDRV
POT
PCC
VDET
VD
HD
VREF
VIN
HREF
HIN
IC105
M5223P
IC106
LSC4321P
IC107
IC108
7414
Q102
Q103
Q104
Q105
Q107
Q109
J504
5V
NC
GSW
V-SYNC
H-SYNC
GND
CP
BGAIN
RGAIN
G-OSD
B-OSD
R-OSD
FBCK
GND
SHDW
R171 0
R177 1K
R179 1K
R148 470K
R149 470K
R178 1K
R180 1K
R154 4.7K
R144 2.2K
R143 120K
R142 100
R155 180
R145 10K
R164 470
R130 470
R173 10K
R126 1K
R146 1K
R139 39K
R140 10K
R131 10K
R132 10K
R133 10K
R141 10K
R108 4.7K
R119 4.7K
R169 390
R156 39K
R157 39K
R158 39K
R161 5.6K-P
R160 5.6K-P
R159 10K-P
R129 1M
R181 10K
R121 1K
R120 10K
R193 470
R198 470
R197 0
R1A0 0 OHM
R151 270
R150 270
R152 270
R153 100
C103 1200P
C131 25V 100M
C136 4700P
C135 25V 220M
C133 0.01M
C134 0.01M
C125 4700P
C126 25V 220M
C127 0.018M
C138 0.1M
C122 4700P
C121 25V 47M
C132 25V 47M
C146 25V 47M
C139 25V 4.7M
C144 25V 22M
C163 220M
C156 220M
C158 8.2K
C157 1000P
C119 0.1M
C120 0.1M
C129 0.01M
C130 0.1M
L100
L102
137 100M
D132 1SS83
220

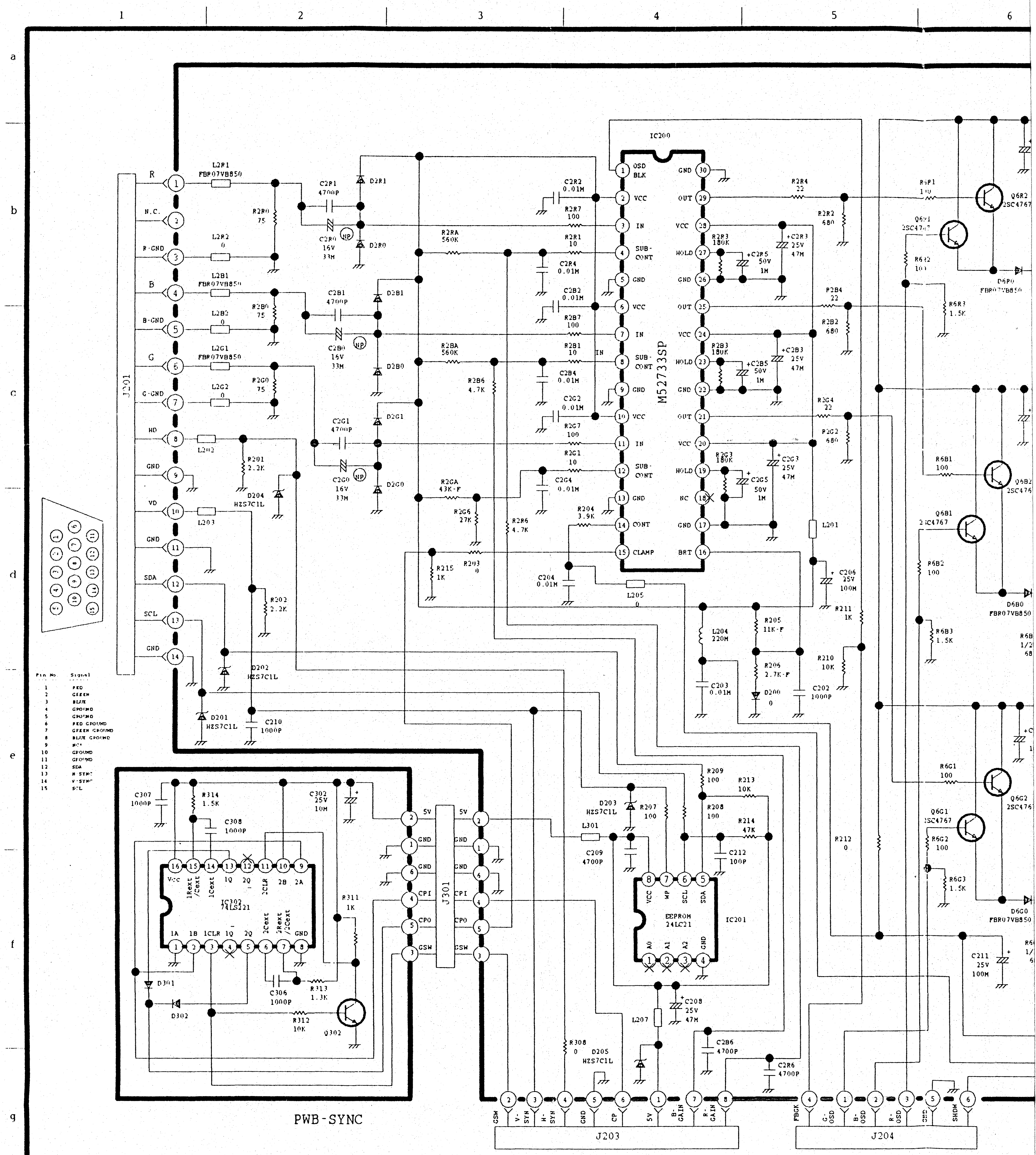
DIODE NOT LABEL IS 1S2076A / 1S2471
ZENER DIODE NOT LABEL IS HZS7C1L
CAPACITOR NOT LABEL IS B50V 0.01MF-K
BEAD FERRITE NOT LABEL IS FBR07HA850
TRANSISTOR (NPN) 2SC3311A
(PNP) 2SA1207S

| DWG. ISSUED | MITSUBISHI ELECTRONICS MFG. S'PORE | | | | TITLE OF DRAWING | CONTROL<br>SCHEMATIC DIAGRAM |
|---|---|---|---|---|---|---|
| | DIM IN MM | SCALE : NTS | DATE :26TH OCT 95 | | | |
| | DRAWN | CHECKED | DESIGNED | APPROVED | DRAWING NO. | |


6
7
8
9
10
11
a
b
c
d
e
f
g
h
CRT
R
G
B
ANODE
FOCUS
SC SCREEN
J205
H2
H1
SA
C600 B2KV 1000P-K
(AG603)
R600 1/2W 220
AG600 DSP301H
AG601 DSP201H
AG602 DSP201H
R601 3W 3.3
C609 1000P
C611 4700P
C612 B500V 220P
Q601 2SC4833 -Y
R602 10K
C601 1000P
C201 0.047H
L206
L601
C610 4700P
C605 B500V 4700P
C603 B500V 4700P
D600 1SS83
L600 0
C602 B500V 4700P
C604 B500V 4700P
C606 250V 10H
C6RE 100V 22H
C6BE 100V 22H
C6GE 100V 22H
R6RH 1/2W 39
R6BH 1/2W 39
R6GH 1/2W 39
L6R2 0.39H
L6B2 0.39H
L6G2 0.39H
AG6R0 DSP201H
AG6B0 DSP201H
AG6G0 DSP201H
C6RC 100V 1H
C6BC 100V 1H
C6GC 100V 1H
VR6R0 20K
VR6B0 20K
VR6G0 20K
R6RL 1W 33K
R6BL 1W 33K
R6GL 1W 33K
L6R0 FBR07VB850
L6B0 FBR07VB850
L6G0 FBR07VB850
D6R3 HZS24 -2L
D6B3 HZS24 -2L
D6G3 HZS24 -2L
D6R1 1SS83
D6R2 1SS83
D6B1 1SS83
D6B2 1SS83
D6G1 1SS83
D6G2 1SS83
Q6R3 2SA1538
Q6B3 2SA1538
Q6G3 2SA1538
Q6R4 2SC3953
Q6B4 2SC3953
Q6G4 2SC3953
C6R7 SL50V 390P -J
C6B7 SL50V 390P-J
C6G7 SL50V 390P-J
C6RA 500V 1500F
C6BA 500V 1500P
C6GA 500V 1500P
C6R9 SL50V 270P-J
C6B9 SL50V 270P-J
C6G9 SL50V 270P-J
C6RF B500V 100P
C6BF B500V 100P
C6GF B500V 100P
R6RP 120K
R6BP 120K
R6GP 120K
R6RR 2W 6.8K
R6BR 2W 6.8K
R6GR 2W 6.8K
R6RA 150
R6BA 150
R6GA 150
R6RD 33
R6BD 33
R6GD 33
R6RF 27K
R69F 27K
R6GF 27K
R6RU 2W 6.8K
R6BU 2W 6.8K
R6GU 2W 6.8K
C6R6 500V 0.01H
C6B6 500V 0.01H
C6G6 500V 0.01H
C6R3 SL50V 68P-J
C6B3 SL50V 68P-J
C6G3 SL50V 68P-J
C6R4 SL50V 180P-J
C6B4 SL50V 180P-J
C6G4 SL50V 180P-J
(C6RD)
(C6BD)
(C6GD)
(R6RN)
(R6BN)
(R6GN)
R6RM 150
R6BM 150
R6GM 150
R6R4 1/2W 68
R6B4 1/2W 68
R6G4 1/2W 68
D6R0 FBR07VB850
D6B0 FBR07VB850
D6G0 FBR07VB850
Q6R2 2SC4767
Q6B2 2SC4767
Q6G2 2SC4767
Q6B1 2SC4767
Q6G1 2SC4767
C6R2 25V 100H
C6B2 25V 100H
C6G2 25V 100H
C6RG 1000P
C6BG 1000P
C6GG 1000P
R6B1 100
R6B2 100
R6B3 1.5K
R6G1 100
R6G2 100
R6G3 1.5K
R6R3 1.5K
C211 25V 100H
J202
G1
NC
CONT
7V
12V
GND
75V
J204
B-OSD
R-OSD
SHDW
PWB-CRT

# VIDEO, CRT
# SCHEMATIC DIAGRAM

| DWG. ISSUED | MITSUBISHI ELECTRONICS MFG. S'PORE | | | | TITLE OF DRAWING |
|---|---|---|---|---|---|
| | DIM IN MM | SCALE : NTS | DATE : 26th OCT 95 | | |
| | DRAWN | CHECKED | DESIGNED | APPROVED | DRAWING NO. |


1
2
3
4
5
6
a
b
c
d
e
f
g
h
J201
R
N.C.
R-GND
B
B-GND
G
G-GND
HD
GND
VD
GND
SDA
SCL
GND
L2R1
FBR07VB850
L2R2
0
L2B1
FBR07VB850
L2B2
0
L2G1
FBR07VB850
L2G2
0
L202
L203
R2R0
75
R2B0
75
R2G0
75
R201
2.2K
R202
2.2K
D204
HZS7C1L
D202
HZS7C1L
D201
HZS7C1L
C210
1000P
C2R1
4700P
C2R0
16V
33M
NP
D2R1
D2R0
C2B1
4700P
C2B0
16V
33M
D2B1
D2B0
C2G1
4700P
C2G0
16V
33M
D2G1
D2G0
R2RA
560K
R2BA
560K
R2GA
43K-F
R2B6
4.7K
R2G6
27K
R2R6
4.7K
R215
1K
R293
0
C2R2
0.01M
R2R7
100
R2R1
10
C2R4
0.01M
C2B2
0.01M
R2B7
100
R2B1
10
C2B4
0.01M
C2G2
0.01M
R2G7
100
R2G1
10
C2G4
0.01M
R204
3.9K
C204
0.01M
L205
0
IC200
M52733SP
OSD BLK
VCC
IN
SUB-CONT
GND
CONT
CLAMP
BRT
HOLD
OUT
NC
R2R4
22
R2R2
680
R2R3
180K
C2R3
25V
47M
C2R5
50V
1M
R2B4
22
R2B2
680
R2B3
180K
C2B3
25V
47M
C2B5
50V
1M
R2G4
22
R2G2
680
R2G3
180K
C2G3
25V
47M
C2G5
50V
1M
L201
C206
25V
100M
R211
1K
R205
11K-F
R206
2.7K-F
D200
0
R210
10K
C202
1000P
L204
220M
C203
0.01M
R212
0
R209
100
R213
10K
R208
100
R214
47K
D203
HZS7C1L
R207
100
L301
C209
4700P
C212
100P
IC201
EEPROM
24LC21
VCC
WP
SCL
SDA
A0
A1
A2
GND
C208
25V
47M
L207
R308
0
D205
HZS7C1L
C2B6
4700P
C2R6
4700P
J203
GSW
V-SYN
H-SYN
GND
CP
5V
B-GAIN
R-GAIN
J204
FBGK
G-OSD
B-OSD
R-OSD
GND
SHDW
J301
5V
GND
CPI
CPO
GSW
PWB-SYNC
C307
1000P
R314
1.5K
C308
1000P
C302
25V
10M
IC302
74LS221
1Rext/Cext
1Cext
1Q
2Q
2CLR
2B
2A
1A
1B
1CLR
2Cext
2Rext/Cext
R311
1K
R313
1.3K
C306
1000P
R312
10K
Q302
D301
D302
R6P1
Q6R2
2SC4767
Q6P1
2SC4767
R6R2
R6R3
1.5K
D6P0
FBR07VB850
R6B1
100
Q6B2
2SC476
Q6B1
2SC4767
R6B2
100
R6B3
1.5K
D6B0
FBR07VB850
R6G1
100
Q6G2
2SC476
Q6G1
2SC4767
R6G2
100
R6G3
1.5K
D6G0
FBR07VB850
C211
25V
100M

| Pin No | Signal |
|---|---|
| 1 | RED |
| 2 | GREEN |
| 3 | BLUE |
| 4 | GROUND |
| 5 | GROUND |
| 6 | RED GROUND |
| 7 | GREEN GROUND |
| 8 | BLUE GROUND |
| 9 | NC |
| 10 | GROUND |
| 11 | GROUND |
| 12 | SDA |
| 13 | H-SYNC |
| 14 | V-SYNC |
| 15 | SCL |

DIODE NOT LABEL IS 1S2076A/2471

FERRITE BEAD NOT LABEL IS FBR07HA850

| ITEM | MODEL |
|---|---|
| 3 | SD5700/02/03/04 C/C(M) |
| 2 | SD5705 C/C(M) |
| 1 | SD5707 C/C(M) |

CHANGE